



**MADURAI KAMARAJ UNIVERSITY**  
**(University with Potential for Excellence)**

**DIRECTORATE OF DISTANCE EDUCATION**

**M.B.A**  
**AIRLINE & AIRPORT**  
**MANAGEMENT**

**FIRST YEAR**  
**I - SEMESTER**

**MANAGERIAL ECONOMICS**

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# MADURAI KAMARAJ UNIVERSITY

(University with Potential for Excellence)

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## **Paper 2 MANAGERIAL ECONOMICS**

**UNIT I :** Managerial Economics - meaning, nature and scope - Managerial Economics and business decision making - Role of Managerial Economist - Fundamental concepts of Managerial Economics.

Demand Analysis - meaning, determinants and types of demand - Elasticity of demand.

**UNIT II:** Supply meaning and determinants - production decisions - production functions - Isoquants, Expansion path - Cobb-Douglas function, Cost concepts - cost - output relationship - Economies and diseconomies of scale – cost functions.

**UNIT III:** Market structure - characteristics - Pricing and output decisions - methods of pricing - differential pricing - Government intervention and pricing.

**UNIT IV:** Profit - Meaning and nature - Profit policies - Profit planning and forecasting – Cost volume profit analysis - Investment analysis.

**UNIT V:** National Income - Business cycle - inflation and deflation - balance of payments - Monetary and Fiscal Policies

### **References :**

1. Joel Dean - Managerial Economics, Prentice Hall/Pearson.
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## **PAPER – II MANAGERIAL ECONOMICS**

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# **UNIT I MANAGERIAL ECONOMICS**

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## **Structure**

- 1.1 Introduction to Managerial Economics
- 1.2 Objectives
- 1.3 Meaning, Nature, and Scope of Managerial Economics
  - 1.3.1. Theory of demand
  - 1.3.2 Theory of production
  - 1.3.3 Theory of price or exchange theory
  - 1.3.4 Theory of profit
  - 1.3.5 Theory of capital and investment
  - 1.3.6 Environmental issues
- 1.4 Managerial Economics and business decision making
- 1.5 Role of Managerial Economist
- 1.6 Fundamental concepts of Managerial Economics.
  - 1.6.1 Marginal and Incremental Principle
  - 1.6.2 Opportunity Cost Principle
  - 1.6.3 Time Perspective Principle
  - 1.6.4 Discounting Principle
- 1.7 Demand Analysis
  - 1.7.1 Meaning of Demand
  - 1.7.2 Types of Demand
- 1.8 Elasticity of Demand
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  - 1.7.2 Classifications of Demand Curves
  - 1.7.3 Factors Determining Elasticity of Demand
- 1.9 Let us sum up
- 1.10 Unit end exercise
- 1.11 Points for discussion
- 1.12 Answers to check your progress
- 1.13 Suggested readings

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## **1.1 INTRODUCTION TO MANAGERIAL ECONOMICS**

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In today's complex marketing environment, a manager should know how to take crucial decisions for their business. Depending on the decisions the manager takes, his or her business can either succeed or end up as a failure. Thanks to the volatile nature of the market, managers have a bigger role to play in their business. The decisions that are taken by the managers are done in accordance to the current nature of the economic situation in their country. Business decisions that relate to the manufacturing and selling of products are taken based on the economic situation that is prevalent in the country as well as outside the country. There have been many changes in the strategies which are being implemented in the marketing process. That is because new developments in technology have been taking place. The usefulness of the goods which are being produced is being focused on. Hence, this has led to a huge change in the marketing techniques used today, that has only further contributed to the burden on the manager. Apart from that, the current market is such that, the rates of the products tend to keep fluctuating with time, making it hard to predict the future. It becomes very hard to make wise business decisions in the current environment. This kind of volatile market requires proper knowledge in analyzing the economics. It enables the managers to take bold, but correct decisions that can benefit the organization. What is the need of the hour is managerial economics. It is a field that has been created to bring a better understanding of economics which can help in making better business decisions using proper analysis and research

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## **1.2 OBJECTIVES**

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After going through this unit, you will be able to

- explain the scope of Managerial Economics and theories around it
- elucidate the role of Managerial Economist
- gain an insight to the fundamental concept of managerial economics
- learn about demand analysis and elasticity of demand

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## **1.3 MEANING, NATURE, AND SCOPE OF MANAGERIAL ECONOMICS**

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Managerial economics is a part of economics. It deals with the techniques that are taken by the management of different organizations. The main aim of the managerial economics is to increase the profits of an organization with their business decisions, which have been taken after analyzing the existing market conditions. It can be defined as the process of helping the management in taking their business decisions with regard to economics. Managerial economics aids in erasing common and persistent issues in regard to marketing. The issues include pricing of products, predicting the market situation, human resource management, and others. These factors are analyzed by managerial economics.

It is the interlink between business management and economics. The given theories come under the scope of managerial economics:

### **1.3.1 Theory of demand**

Spencer and Siegelman have defined the theory of demand as, "A business firm is an economic organization which transforms productivity sources into goods that are to be sold in a market." The demand should be analyzed here. It enables the management to take decisions only after forecasting the demand in the market. Only when the management is aware about the current demand of the consumers, they can produce the products accordingly and sell them, resulting in less wastage and loss. The demand theory also plays a vital role here. The demand theory is all about the behavior of the consumer. Questions like why the consumer might want to purchase the product, what price are they expecting the product to be, the reasons for the consumers not purchasing the products, and similar questions need to be answered.

### **1.3.2 Theory of production**

How many products need to be produced? How much will they cost to make? These two questions are vital during manufacturing of the products. They will decide whether or not the products can be produced on time and can be sold in the market. Goods can be produced in a efficient manner only when the resources are managed in

a better way. Before the goods are produced the management needs to find out the best way to get better results. The cost of producing the goods should not hamper the pricing of the products. That can affect the margin of profits for the business.

### **1.3.3 Theory of price or exchange theory**

The price theory is based on the current market conditions which enables the management to fix a price for their products. As far as managerial economics go, the price of the goods plays a crucial role. The success for the business largely lies in the pricing of the goods. When the pricing is perfect for the consumers, then better yields can be got.

### **1.3.4 Theory of profit**

Each organization will have the goal to do well and increase the profits. The profit a company makes is the remainder of the total economic cost and total revenue. The total economic cost has to be lower than the total revenue.

Factors like cost of production, product demand in market, market condition, and behavior of the prices which fluctuate with different market conditions has to be studied.

### **1.3.5 Theory of capital and investment**

The capital and investment which will be done by the management has to be based depending on the maximum budget for the company, the budget allocated for various projects wisely, assessing the budget from time to time, and decreasing the chances of low budgeting or high budgeting.

The budget allocated for different purposes has to be used accordingly.

### **1.3.6 Environmental issues**

The environmental factors also make up managerial economics. Environmental factors include the political and social environment that is surrounding a business. Factors like, what is the current economical situation of the country, what is the industrial policy in the country, what are the tax rates in the country, what is the labor policy of the country, what are the attitude of the trade unions, and the political scenario of the country. These factors cannot be controlled by the management and hence has to be viewed before the plans are executed.

The management must be able to utilize the resources that are available to them for the maximum benefit for the business. However, regarding resources like air, water,

and sunshine, the management cannot be held responsible.

It is clear that managerial economics is required for the management to take proper decisions.

### **Check Your Progress 1**

- i) What do you understand by the meaning of managerial economics?

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- ii) What is the definition of managerial economics according to Spencer and Siegelman?

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- iii) What is the scope of managerial economics?

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- iv) Which theory do you feel plays the most important role and why?

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## **1.4 MANAGERIAL ECONOMICS AND BUSINESS DECISION MAKING**

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When managerial economics are applied in decision making in the real world, then it becomes easier to understand the concepts in a better manner. Small businesses and large establishments have implemented the concepts of managerial economics and increased their profits in a considerable way. Some business establishments which are popular have made successful decisions in

their policies which have yielded better results, all thanks due to managerial economics.

That leads us to the question, how managerial economics have influenced decision making. As read in the above lesson, managerial economics is a necessity for managers. It enables them to take right decisions that can be beneficial for their business.

Let us see some examples of some real players, who took some bold decisions based on managerial economics and benefited from them.

In the early 1990s, the electronics industry began to slowly form in India. Some of the big names like Panasonic, LG, Sony, and Samsung, began to foray into the Indian consumer market. By the late 1990s, it developed and these electronic manufacturing companies were able to take a major share in the market. How was that possible? Due to managerial economics, these global players took the right stance and made their presence felt in India.

They invested in India by setting up facilities for manufacturing their goods. In order that their share in the market does not decrease, they differentiated their products from others. Each electronic company brought out products with a unique style and set of features that appealed to the Indian consumers. You would be surprised to know that in those days Samsung was ranked among the last of the four. However, today it has been able to give a run for money to many electronic companies in the world, including Apple. The current global market is featuring goods that are made mostly by Samsung.

In the sense, one out of four electronic device holders make use of Samsung products. That was possible because the company took a correct decision based on consumer needs. They brought out products that come with the latest technology and style.

It clearly shows that the decision is based on the economy. We can look at another example, about Reliance Industries also making use of decisions based on economics. The firm wanted to increase the inputs in the country and hence started production capacities.

Decisions have to be based on the given below pointers:

### **Objectives have to be finalized**

The manager will have to finalize the objectives before taking decisions for the

company. Only when the manager knows the aims of the company, they can make the decision based on that.

### **The problem has to be defined**

While making decisions, the problem has to be defined. Problems can come up when the company is developing new projects or planning.

### **Alternatives have to be identified**

The alternatives have to be identified when the problem has been found out. Questions like, what options do we have or what is our aim might come up. The answers have to be ready then.

### **Best alternative has to be selected**

Once the alternatives have been identified, the best alternative has to be selected.

### **The decision has to be implemented**

When the best alternative has been decided, it has to be implemented without delay. Establishments have to be organized like the army. Unless there is some discipline, it can become very hard for the decisions to be implemented in a proper manner

## **Check Your Progress 2**

- i) How managerial economics influences decision making?

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- ii) What are the pointers that affect the decisions a manager has to take?

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## **1.5 ROLE OF MANAGERIAL ECONOMIST**

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Every company needs a qualified individual to guide them in their decision making. That individual should be able to access the current situation in the company as well as the market and then advise the company on taking their decisions. The decisions that a particular company takes during harsh market conditions as advised by the

managerial economist will reflect on the results that will appear in the near future. What is a managerial economist? A managerial economist is someone who takes marketing decisions that is based on the current market situation and advises the company on the necessary changes that should be taken. They suggest changes in the company's policies that will enable to see better growth. The company policies referred here include changes in monetary policy, fiscal policy, functioning of the firm, and employment policy.

The given below problems are accessed by the managerial economist.

1) The products and services which should be manufactured on a higher scale. The managerial economist advises the company on the products and services which must be manufactured on a higher scale. They do a research on the products and services that can provide better yields for the company and advise them accordingly.

2) The manufacturing methods to be made use of.

The managerial economist suggests some changes in the manufacturing methods that are being currently implemented in the company. The changes are suggested so that the company can reduce their overhead cost and save their resources. For any company, to remain afloat in the current market situation, cost-effective manufacturing methods hold the key.

3) The production levels and the rates that are to be fixed.

The production levels and the rate of the products should be finalized based on the current market conditions. Sometimes when the demand for the product is low, then the prices have to be decreased. Similarly, when the demand for the product is high, the price can be increased accordingly.

4) The location and size of the production capacity.

When the company is planning on a new production facility, they need to know the location and size of it. That depends on the current political situation in the location, the climatic conditions, the economic growth, the labor condition, and others. The managerial economist advises the management on the above.

5) The equipments and materials that are required.

The management will also need to know about the equipments and materials that are

required in the new production plant. The managerial economist will suggest them about which equipment to purchase and the materials that are needed. The equipments will have the latest technology infused in them that can help increase production.

#### 6) The budget allocation for the new production.

The budget also has to be decided for the new production plant. The managerial economist will suggest that depending on the current financial status of the company as well as the market conditions.

Small and large companies require a managerial economist. Examples of firms making use of a managerial economist are Tata, IPCL, and HLL.

### **Check Your Progress 3**

- i) Who is a managerial economist?

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- ii) What role does a managerial economist play for a company?

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## **1.6 FUNDAMENTAL CONCEPTS OF MANAGERIAL ECONOMICS**

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Managerial economics deals with concepts such as marginal and incremental principle, opportunity cost, discounting principle, and many others. The marginal and incremental principle, opportunity cost, and discounting principle play an important role in the decisions which a company makes. They are the fundamental concepts of managerial economics.

What are the fundamental concepts of managerial economics? The fundamental concepts of managerial economics are given below:

### **1.6.1 Marginal and Incremental Principle**

The marginal and incremental principle is about wisely using the resources that are present. Good managers know how to make use of the resources that are provided to them. They don't complain about the situation, rather takes things forward. That is possible using marginal analysis. Marginal analysis refers to a small increase or decrease in the changes that a company gets when it implements certain policies. The term marginal means small. The pricing of their products can be taken as an example here. When the company wants to change the price of their products, the revenue, and production cost have to be taken into consideration. The prices are changed only when the company feels that they will earn more revenue.

Incremental principle refers to the financial changes that take place when decisions are made. When a new equipment or material is purchased and something else is required for utilizing the equipment or material, then that is referred to as the increment. If the production increases which enables better revenue growth, then that situation is known as the incremental value.

Managers should not only focus on the entire cost of producing the goods. The increment that is got from it must be also taken into consideration. A decision can be termed as incremental when revenues are higher than the production cost, some cost is decreased and some are increased, revenues in certain areas are increased and some areas are reduced, and the most important of all, the overall costs are decreased.

### **1.6.2 Opportunity Cost Principle**

The opportunity cost principle refers to a business decision when certain variables can improve the revenues. When the revenues of a business increase due to some changes in the company's policies, then it is called as the opportunity cost principle. The opportunity cost comes up when a company has more alternatives to choose from. When the best alternative is chosen and better revenues are getting, then that situation is known as cost of sacrificed alternatives.

### **1.6.3 Time Perspective Principle**

The time perspective principle highlights the fact that the company must take business decisions that are based on the lower and higher side. All factors should be taken into consideration before decisions are made.

#### **1.6.4 Discounting Principle**

The discounting principle relates to when a business decision can affect the future production cost and results, the current production cost and results have to be discounted. It is a known fact, that value of money changes with time. The value of a current national currency does not remain the same. It changes everyday. Today, the Indian Rupee is not as strong as it used to be a few years ago. The global market coupled with other national financial decisions has brought it to that state. This factor has to be taken into consideration when finalizing the future production costs and results.

#### **Check Your Progress 4**

- i) What are the fundamental concepts of managerial economics?

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- ii) Briefly discuss the fundamental concepts of managerial economics.

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- iii) When can a decision be termed as incremental?

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#### **1.7 DEMAND ANALYSIS**

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The term demand is a common one and many of us might have used it once in a way. It mostly means desires or wants. In managerial economics, demand has a definition and here we will try to understand, the meaning of the demand, the types of demand, and the determinants of demand. It is important that the term demand is understood from what a consumer thinks and how the company looks at it.

### **1.7.1 Meaning of Demand**

What is demand? Managerial economics refers demand from a company's perspective. Certain factors like the market of the product, the demand from the consumers and the cost of producing the product depend on the demand. It is crucial that the consumer's thoughts are found out as the demand of the product depends on them. You can say that for a company to remain in production, demand of the product is vital. Only when the product has a demand in the market, the company is in production. Any company is concerned about the revenues that it is able to make.

The revenues that company makes heavily rely on the demand of what they produce. How the management produces the product, prices the product, allocates the cost for the product, advertise the product depend solely on the demand. That is because, when the demand for a commodity is poor, the company will have to go to no ends to meet the consumer's satisfaction.

Though the price of the commodity is decreased, the consumer must be convinced that the product is meant for them. If the demand of the commodity is high, then the company can increase the pricing as they know that the consumer needs the commodity and will surely purchase it, no matter what.

So, it can be said that demand for a particular product depends on the desire of the consumer to get it, their readiness to purchase it, and their purchasing power. In other words, how much the consumer wants the product, are they willing to purchase it, can they purchase it are some of the things that a company should know.

### **1.7.2 Types of Demand**

There are several types of demand. Demand is based on many factors which have to be considered before business decisions are made. It is important that the demand is understood at all levels.

There are certain factors that affect the demand. They are as follows:

#### **Consumer Goods and Producer Goods**

Consumer goods are commodities which are finished and can be used. Producer goods are products which are utilized for manufacturing the commodities.

#### **Perishable and Durable Goods**

Perishable goods refer to the goods that cannot be used after a certain period of time.

Durable goods like the name goes, last for a longer time. However, perishable goods are easy to sell when compared to durable goods. Perishable goods refer to food items and other products that can become unfit for use after a certain period of time. Durable goods can last their time and can be used. Depending on how they used, they can last. Durable goods are costlier than perishable goods and require a lot of marketing.

### **Autonomous and Derived Demand**

Autonomous demand refers to the demand for goods that does not relate to the demand of other goods. Derived goods are the commodities which are related to the demand for other goods. It becomes hard to say that autonomous goods exist because each product is related to the demand of another product in some way or the other. However, that depends on the commodity. Autonomous and derived demand have many differences than similarities.

### **Individual's Demand and Market Demand**

The individual demand is the demand that is done by the consumer. The market demand is the demand that is brought out by a market, through its consumers.

### **Firm and Industry Demand**

Firms produce commodities based on the demand from the industry. If the industry is going well, then the firm produces more number of goods.

### **Demand by Market Segments and by Total Market**

Market segment demand refers to the demand that is made by a particular locality. The total market demand is the demand that is made from the whole market.

### **Determination of Demand**

The determination of the demand comes from many factors. The Demand Theory states that the demand for the commodity is based on the rates of products, income earned by the consumer, and not only the price of the product.

The determinants of demand have had an impact which is given below:

- The rate of the product
- The substituting effect of the product
- The complementary effect of the product
- The expectation of the price of the product
- The income of the consumer
- The advertising effect of the product

Other determinants including habits, customs, tastes and preferences, and others also depend on the demand.

The Law of Demand is the inverse relationship between the quantity demanded in a particular time and the price of the commodity.

### Check Your Progress 5

- i) What is the meaning of demand analysis?

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- ii) What are the determinants of demand analysis?

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- iii) What are the types of demand analysis?

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- iv) What is the Law of Demand?

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## 1.8 ELASTICITY OF DEMAND

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According to the law of demand, when the price of a product is decreased, the consumers tend to purchase more of that product. While that might be true to a certain extent, the actual response by the consumers because of the change in price cannot be determined. This is where the price elasticity of demand comes into play. One can not only find out the response of the consumers, but the actual level of response due to the change in price.

### **1.8.1 Meaning of Price Elasticity of Demand**

What is the meaning of price elasticity of demand? The price elasticity of demand can be used as ( $Ed$ ). It is the changes in the price of a product to the responsiveness that is getting due to that. It is represented as:

$$Ed = \text{Percentage change in quantity demanded}/\text{Percentage change in price}$$

For example, when the product price reduces from \$5 to \$3, then consumers naturally increase their purchases. It is thought here that consumers are solely dependant on the price change and that affects their purchasing. It is termed as elastic demand. The above formula can also be interpreted as demand is elastic. The change in the percentage of the cost of product results in more purchase. If 4% reduction in the pricing results in a 8 % increase in the production, the demand is elastic. Similarly, when the pricing is changed and only a small percentage of quality is sold, then the demand is inelastic. When 5% of the pricing is changed, but it only gives 2% increase in the quality, then the demand is called inelastic.

### **1.8.2 Classifications of Demand Curves**

Demand is classified into five categories which are given below:

- 1) Perfectly inelastic demand curves
- 2) Inelastic demand curves.
- 3) Unitary elastic demand curves.
- 4) Elastic demand curves.
- 5) Perfectly elastic demand curve.

### **1.8.3 Factors Determining Elasticity of Demand**

There are many factors that determine elasticity of demand.

#### **Necessity goods and luxury goods**

Necessity goods have inelastic demand. The consumers will always end up purchasing the commodities not matter the price. That is because, they need the commodities. It is something that they cannot do without. In contrast, luxury goods are elastic. The consumers might not be interested in spending more money if the prices of the products are increased further. Luxury goods are not a necessity. Consumers can survive without them.

### **The cost of the goods**

Another factor that determines the elasticity of demand is the cost of goods. It is seen that commodities like homes are elastic. Though the prices are slightly increased, the consumers are affected in a big manner. At the same time, when the price of products like mobile phones is increased, they are not affected much. The cost of goods matter here for consumers.

### **Substitutes of products**

Some products can be substituted. These commodities are elastic to those products that cannot be substituted.

### **Time period**

When consumers use a particular commodity for a long period of time, they might take longer time to decide before purchasing another commodity. That is not the same, when they use products for a short time.

### **Check Your Progress 6**

- i) What is elasticity of demand?

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- ii) What is the classification of demand curves?

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- iii) What are the factors determining the elasticity of demand?

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### **1.8 LET US SUM UP**

In this unit we made an attempt to illustrate the meaning, nature and scope of the managerial economics and the theories regarding the same. We also explained what role does a managerial economist play and what principles are behind this field of

study. Lastly we concluded the things with analysis of demands, its types and factors affecting its elasticity.

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## **1.9 UNIT END EXERCISES**

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- 1) What are the theories behind managerial economics. Explain them all in brief
  - 2) Explain in details, the four principles on which Managerial economics is
  - 3) based upon.
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## **1.10 POINTS FOR DISCUSSION**

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Suppose you are a managerial economist. Tell us how will you fare the trade with demand? Also what are the factors you got to keep in mind

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## **1.11 ANSWERS TO CHECK YOUR PROGRESS**

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1. i) Managerial economics is a part of economics. It deals with the techniques that are taken by the management of different organizations.  
ii) Spencer and Siegelman have defined the theory of demand as, "A business firm is an economic organization which transforms productivity sources into goods that are to be sold in a market." The demand should be analyzed here. It enables the management to take decisions only after forecasting the demand in the market. Only when the management is aware about the current demand of the consumers, they can produce the products accordingly and sell them, resulting in less wastage and loss.  
iii) The management must be able to utilize the resources that are available to them for the maximum benefit for the business. However, regarding resources like air, water, and sunshine, the management cannot be held responsible.  
It is clear that managerial economics is required for the management to take proper decisions.  
iv) The capital and investment which will be done by the management has to

be based depending on the maximum budget for the company, the budget allocated for various projects wisely, assessing the budget from time to time, and decreasing the chances of low budgeting or high budgeting. The budget allocated for different purposes has to be used accordingly.

2. i) When managerial economics are applied in decision making in the real world, then it becomes easier to understand the concepts in a better manner. Small businesses and large establishments have implemented the concepts of managerial economics and increased their profits in a considerable way.

ii) Decisions have to be based on the given below pointers:  
Objectives have to be finalized

The problem has to be defined Alternatives  
have to be identified Best alternative has to be  
selected The decision has to be implemented

3. i) A managerial economist is someone who takes marketing decisions that is based on the current market situation and advises the company on the necessary changes that should be taken. They suggest changes in the company's policies that will enable to see better growth. The company policies referred here include changes in monetary policy, fiscal policy, functioning of the firm, and employment policy.

ii) Every company needs a qualified individual to guide them in their decision making. That individual should be able to access the current situation in the company as well as the market and then advise the company on taking their decisions. The decisions that a particular company takes during harsh market conditions as advised by the managerial economist will reflect on the results that will appear in the near future.

4. i) Managerial economics deals with concepts such as marginal and incremental principle, opportunity cost, discounting principle, and many others. The marginal and incremental principle, opportunity cost, and discounting principle play an important role in the decisions which a company makes. They are the fundamental concepts of managerial economics.

ii) The fundamental concepts of managerial economics are given below:

Marginal and Incremental Principle

## **Opportunity Cost Principle**

<b>Time Perspective</b>	<b>Principle</b>
<b>Discounting Principle</b>	

iii) Incremental principle refers to the financial changes that take place when decisions are made. When a new equipment or material is purchased and something else is required for utilizing the equipment or material, then that is referred to as the increment. If the production increases which enables better revenue growth, then that situation is known as the incremental value

5. i) There are several types of demand. Demand is based on many factors which have to be considered before business decisions are made. It is important that the demand is understood at all levels.

ii) The determinants of demand have had an impact which is given below:

- The rate of the product
- The substituting effect of the product
- The complementary effect of the product
- The expectation of the price of the product
- The income of the consumer
- The advertising effect of the product

Other determinants including habits, customs, tastes and preferences, and others also depend on the demand.

iii) Autonomous and Derived Demand

Individual's Demand and Market Demand

Firm and Industry Demand

Demand by Market Segments and by Total Market

iv) The Law of Demand is the inverse relationship between the quantity demanded in a particular time and the price of the commodity.

6. i) The price elasticity of demand can be used as ( $Ed$ ). It is the changes in the price of a product to the responsiveness that is getting due to that. It is represented as:  
 $Ed = \text{Percentage change in quantity demanded}/\text{Percentage change in price}$ .

ii) Demand is classified into five categories which are given below:

- 1) Perfectly inelastic demand curves
  - 2) Inelastic demand curves.
  - 3) Unitary elastic demand curves.
  - 4) Elastic demand curves.
  - 5) Perfectly elastic demand curve.
- iii) There are many factors that determine elasticity of demand. Necessity goods and luxury goods

The cost of the goods Substitutes  
of products Time period

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## **1.12 SUGGESTED READINGS**

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Joel Dean - *Managerial Economics*, Prentice Hall/Pearson.

Rangarajan - *Principles of Macro Economics*, Tata McGraw Hill.

Atmanand, *Managerial Economics*, Excel, (2001).

Athmanand.R., *Managerial Economics*, Excel, (2002), New Delhi.

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# **UNIT II SUPPLY MEANING AND DETERMINANTS**

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## **Structure**

- 2.1 Introduction to Supply**
- 2.2 Objectives**
- 2.3 Meaning of Supply and Determinants**
  - 2.3.1 Meaning of Supply**
  - 2.3.2 Determinants of Supply (Law of Supply)**
  - 2.3.3 Factors influencing Elasticity of Supply**
- 2.4 Production Decisions**
- 2.5 Production Functions**
  - 2.5.1 Isoquants**
  - 2.5.2 Expansion Path**
  - 2.5.3 Cobb-Douglas**
- 2.6 Cost Concepts**
- 2.7 Cost - output relationship**
  - 2.7.1 Costs in the Short-Run**
  - 2.7.2 Short-Run Total Cost and Output**
- 2.8 Economies and diseconomies of scale**
- 2.9 Cost functions**
  - 2.9.1 Optimum Output Level**
  - 2.9.2 Optimum Inventory Level**
  - 2.9.3 Optimum Scale**
- 2.10 Let us sum up**
- 2.11 Unit end exercises**
- 2.12 Points for discussion**
- 2.13 Answers to Check Your Progress**
- 2.14 Suggested readings**

## **2.1 INTRODUCTION TO SUPPLY**

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In the previous lesson we read about managerial economics, how it affects business decision making, and the role that a managerial economist plays in a company. We also read about the significance of demand and the importance that it has in any industry. Just like demand, every business also needs a supply. Both demand and supply play a crucial role in any industry. Without them, no business can function. That is why it becomes crucial in managerial economics, that one understands these concepts during the early stages itself. As we read, demand is made by consumers. They decide on demand and the business needs of the consumers to supply the demand accordingly. Knowing the concepts of supply and how the pricing affects the supply is important. When consumer demand more, it is essential that companies know how to increase their supply and meet the consumer demands. When the demands are not met at the right time, then the supply is at fault. Market conditions are never the same always. They vary depending on the economical situation of the location and that is why it is vital that one understands the elasticity of supply. There are several factors that influence it too.

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## **2.2 OBJECTIVES**

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After going through this unit, you will be able to

- explain the Meaning of Supply and Determinants**
- elucidate the Factors influencing Elasticity of Supply**
- gain an insight in Production Decisions and Production Functions**
- learn about Cost - output relationship**

## **2.3 MEANING OF SUPPLY AND DETERMINANTS**

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### **2.3.1 Meaning of Supply**

Supply means the ability of a business to produce the required quantity that the consumers need at a particular time for a specific price. It is clear that supply is directly involved to demand. For a business to produce goods, the process of supply becomes very difficult. The supply of the finished commodity matters a lot with managerial economics. However, it also depends on the business ability to produce and supply the commodities at the right time depending on the needs of the consumer.

### **2.3.2 Determinants of Supply (Law of Supply)**

Since we now have a brief idea about supply, we need to understand the law of supply. The law of supply indicates that when commodities are supplied in more quantities, the prices will be higher. The remaining parts that are not related to the commodity will be supplied at a lower price. The price of the goods will regulate the demand and the supply. If the price of a commodity is increased, then the business needs to make changes in their production levels so that they can increase their supply.

When the price of the product is high, then the business stands to make better profits. The production increases which only helps in better output.

Few shift factors that can affect the production include:

- Prices changes of production materials
- Technological changes
- Expectations of suppliers
- Tax change

The other factors that influence the supply apart from price are:

**Production cost:** The cost of producing goods influences the supply. Production cost includes capital, labor, and land. Supposing the production cost increases, then the production will automatically decrease irrespective of the price of the commodity.

**Interrelated goods:** Few goods are interrelated. They depend on the production of each other. When one of the goods is produced in a low manner, then the

production of the other goods is affected.

**Natural disasters:** Natural disasters can affect the production. Floods and poor weather conditions can affect the production in a business.

**Taxes:** The taxes in the locality affect the production. If the taxes are high, then the production is reduced.

### **2.3.3 Factors influencing Elasticity of Supply**

Some of the factors that influence elasticity of supply are time factor which is the short period, the momentary period, and the long period.

#### **Check Your Progress 1**

- i) What is the meaning of supply?

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- ii) What are the determinants of supply?

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## **2.4 PRODUCTION DECISIONS**

Production is the ability of a company to produce a certain amount of goods at a given time. Companies usually take similar business decisions like should they produce goods or not, the quantity that should be produced, and the inputs that must be used. One of the crucial decisions a company should take is, whether they should produce goods or not. Sometimes when the market condition is poor, then it is not profitable in producing the goods. The company is not going to benefit in any way by producing the goods. During these situations it is best not to produce the goods at all. The second thing that is discussed is the quantity that should be produced. The amount of the goods that must be produced should be known. Only when that is finalized, then only the company can make a right decision and produce the actual number of goods that can get profits. Finally, the input that

must be used has to be decided on. The inputs are the raw materials that are needed to manufacture the goods. It should be seen that the input materials are readily available. There should not be any problem in procuring the raw materials. This way, the goods can be manufactured in an efficient manner. It is crucial that the deadlines are met. Consumers might not be pleased about delays in receiving their goods, which is why companies should ensure that the raw materials are ready for use. No problems should arise once production has commenced.

Inputs refer to the land, capital, and labor which go into producing the goods. It should be noted here that it can be variable or fixed. Fixed inputs cannot be immediately altered or changed, while variable inputs can be replaced immediately within a short notice. Fixed inputs refer to the company's plant.

It cannot be altered immediately. However, when large amounts of money are spent, it can be changed to a certain extent. It is unlikely that companies alter their plant design or style once it has been constructed. Variable inputs refer to labor. They can be replaced at short notice. Sometimes in large manufacturing establishments, labor problems can take place due to various reasons. In such instances, it is common that the management replaces them with other laborers. These tasks don't require formal training and can be done by any person with minimum skills.

The time taken to produce the goods is called as the time period. During the time period, when one of the inputs is fixed, then that situation is known as Short-Run. When all inputs are variable in a time period, that situation is known as Long-Run. The type of the industry decided on the situation. If there is a dry cleaning company, then the Long-Run might take months. That is because, the tasks are such. Unlike them, the production industry manufactures fewer quantities in the beginning and then waits for the market to decide on their future production. As the technology increases the production is increased from less or more inputs.

## **Check Your Progress 2**

- i) What are the three basic decisions a business has to take?

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- ii) What is the meaning of inputs and how they affect production?

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## **2.5 PRODUCTION FUNCTIONS**

The production team of any company is handled with the task of using methods that can increase their production. Certain terms are utilized for outputs and inputs.

### **INPUTS**

Factors

Factors of production

Resources

### **OUTPUTS**

Quantity (Q)

Total Product (P)

Product

The production function is the relationship between the maximum quantity of goods which can be produced at a time period and the inputs. The output and input are taken only taking into account the technological specifications. The formula can be taken as below.

$$Q = Q(L, N, K, \dots)$$

According to a production function,  $Q$  is the maximum amount of quantity which a company can produce when inputs (Land  $L$ , Labor  $N$ , and Capital  $K$ ) are used.

It can also be shown as:

$$Q = f(X_1, X_2, \dots, X_k)$$

where  $Q$  = Output  $X_1, \dots, X_k$  = Inputs used.

It has to be noted that:

- iii) Capital and labor are a necessity inputs to produce goods, and
- iv) Capital and labor are substitutes to each other when production commences.

### 2.5.1 Isoquants

Isoquants are represented geometrically as the production function. Using various combinations, same level of quantity can be produced. When there is continuous variation of labor and capital, a curve can be drawn using these alternative combinations for a given level of output. The curve is the main point of all the combinations which can be done, is known as the Isoquant.

#### Types of Isoquants

The types of Isoquants are given below:

**Linear isoquant:** Linear isoquant is where a particular goods can be manufactured using labor and capital, or by infinite combination of  $L$  and  $K$ .

**Input-output isoquant:** There is only one method of production for any one commodity. **Kinked isoquant:** There are few methods for manufacturing one commodity.

**Smooth, convex isoquant:** The capital and labor can go over a certain range, after which they cannot substitute each other.

The isoquants have properties that are given below:

An isoquant will slope downward to the right.

An isoquant is convex to the origin.

An isoquant is continuous and smooth.

Two isoquants will never intersect.

## 2.5.2 Expansion Path

An expansion path is combinations of labor and capital which are able to meet the efficiency condition  $MPL/w = MPK/r$ . Only when the expansion path is found out, it is not required to know the isoquant-isocost system. The business can manufacture goods on the points on the expansion path.

The expansion path highlights the best input combinations. It shows the input combinations which can give the optimal results.

## 2.5.3 Cobb-Douglas

The Cobb-Douglas production function is the most popular method. When  $Q = Q(L, K)$ , then the physical output level,  $Q$ , depends upon, quantities of Labour ( $L$ ) and Capital ( $K$ ).

The Cobb-Douglas form is  $Q = L^a K^{1-a}$  where  $0 < a < 1$  and  $A$  and  $a$  are constants. It can be also written as the Constant Elasticity of Substitution, CES function,  $Q = B [gL^{-h} + (1 - g) K^{-h}]^{-1/h}$

where  $h > -1$  and  $B, g$  and  $h$  are constant

### Check Your Progress 3

iii) What are Isoquants?

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iv) What are the types of Isoquants?

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v) Discuss briefly on the types of Isoquants?

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## **2.6 COST CONCEPTS**

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The cost of the products is a very important factor for any business to operate. The cost of the product has to be based on the market conditions. That is why, it is vital to understand the different concepts of costs and how they should be used. The two things that should be clearly understood here is the cost estimates which are produced by financial accounting are not useful to all managerial uses and different market issues require different elements of costs.

### **Future and Past Costs**

Future costs depend on the current and past costs. The future costs are decided depending on the market conditions. The past costs are costs that got due to the income of a particular business.

### **Incremental and Sunk Costs**

Incremental costs are the changes in total costs which have been getting from business decisions that have been taken in the past. Both variable and fixed costs come under incremental cost. Sunk cost remains at the level it was. No matter the market conditions, it does not change.

### **Out-of-Pocket and Book Costs Theory of Cost**

Out-of-pocket costs are outside payments that have to be done immediately. The salary of the manager when not paid is the book cost. The book costs are changed to out-of-pocket costs when assets are sold to the buyer.

### **Replacement and Historical Costs**

The historical cost of the asset is the cost of equipment, materials, and plant. The replacement cost is the cost that the business will have to take up when things have to be replaced.

### **Explicit Costs and Implicit or Imputed Costs**

Explicit costs are expenses paid by the business. Implicit costs are costs that are not taken in the accounts of the business.

## **Actual Costs and Opportunity Costs**

The actual costs are the expenditure that has taken place when manufacturing goods. They are recorded. The opportunity costs are also known as the alternative costs. They are the profits that have been gained by a company using the same resources.

## **Direct (Separable or Traceable) Costs and Indirect (or Common Nontraceable) Costs**

Direct (separable or traceable) costs are the costs which are directly incurred due to the production of a particular commodity. The other cost, which have been spent are called as the indirect (or common nontraceable) costs.

## **Shutdown and Abandonment Costs**

The shutdown costs occur if the work is stopped. Costs take place as the equipments have to be covered and protected. If the business plant will be closed, then the cost to shut it down is called as the abandonment cost.

## **Private and Social Costs**

If a business plans to expand operations, then it will have to purchase things for itself, which is known as private cost. When costs are undertaken for the society, it is called as social costs. When the commodity is produced, the cost that takes place due to the society is called as social cost.

## **Fixed and Variable Costs**

Variable costs are the costs that are incurred due to the hiring of labor, purchasing of equipments and the like. When the plant location and the top management have to be changed, then it might take time to do so, they are known as fixed costs.

#### **Check Your Progress 4**

ii) What are the cost concepts?

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iii) What are the types the cost concepts?

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## **2.7 COST – OUTPUT RELATIONSHIP**

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As we saw, production enables us to find out how a business can produce efficiently. It showcases the nuances of producing using the least inputs. The process of getting the inputs effectively altered into outputs is known as production. Any business should beware about the costs of its production at different levels of output. “A cost output function is a relationship between the value of production-inputs that are used by the firm in each period and the corresponding rates of output attained.” The cost functions are getting from a production function that highlights efficient ways of producing goods. The cost-output relationship is very crucial for a business to know. Other variables are not taken into consideration when between cost and rate of output. However, the cost-output relationship is a partial relationship. The short-run and the long-run period are taken to analyze the relationship between output and cost. The short-run period does not allow changes in equipments or business size. The long-run period provides time to change the equipments and business size.

### **2.7.1 Costs in the Short-Run**

The short-run cost-output relationship happens for a fixed plant. The variations in cost over the output of a given capacity vary with businesses of different size. When managers need to make decisions total cost and output relationship has to

be known. The short-run cost-output relationship can be discussed as total cost and output, average costs and output, and marginal cost and output.

## **2.7.2 Short-Run Total Cost and Output**

When the business has taken decisions on its resources like equipment, top management, and building, their amounts cannot be altered. In the short-run these resources for which the amounts cannot be altered are called fixed factors. The other resources whose quantity can be changed immediately are called variable factors. As certain factors will not change with the change in output, the cost to the business of these resources is also fixed. Hence cost to the business does not vary with output. When the quantity of commodity produced is large, the fixed cost per unit will be low. Marginal fixed cost will always be zero. Factors whose quantity can be changed in the short-run are called as a variable cost. Thus, the total cost of a business is the sum of its total variable costs (TVC) and total fixed cost (TFC). This is,  $TC = TFC + TVC$ . The total fixed costs include:

Salary of staff.

Machinery costs.

Expenses for building repairs.

Expenses for land maintenance.

The total variable costs include:

Raw materials.

Cost of direct labor.

The running expenses of fixed capital, such as full, ordinary repairs and routine maintenance.

According to the economic theory, the nature of total variable cost is such that in the beginning as output increases, total variable cost increases at a decreasing rate, then at a constant rate and eventually at an increasing rate. The increase in total variable cost reduces to a certain level of output, and then remains constant for some range of output, and again starts rising. It should be noted that the general behavior of the variable cost function may vary from product to product and will have to be verified.

### **Check Your Progress 5**

- v) What is the cost-output relationship?

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- vi) What is short-run total cost and output?

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## **2.8 ECONOMIES AND DISECONOMIES OF SCALE**

It is vital to know why large businesses experience a reduction in the cost per unit of their products. This result in an increase of the production costs for the business. According to the law of diminishing returns, only one input can be taken as a variable. The economies and diseconomies of scale can help you understand the LAC curve and why the U- shape occurs. The definition of economies of scale is where the output of the business increases quicker than the inputs which are used to produce the final product. When the prices are constant, the cost of one unit increases. Hence, the main reason for scale of economies is due to the increasing returns to scale in the businesses manufacture in the long run.

This is highlighted in the decreasing amount of the LAC. When the returns of scale are decreasing, the production is increased, but not at a higher rate when compared to the input. When the rate of the input is constant, the cost of the product increases. The increasing amount of LAC showcases this change as the lowest point on the LAC curve happens at the output level. The output level is the increasing returns to scale are balanced almost by the decreasing returns to scale. Economies of scale occur because of financial and technological reasons. It is also called as economies at firm level and plant level respectively.

### **Economies of Scale**

Economies of scale at a business occur due to the increase in the activities that are taking place. Specialization of labor can take place with more specialized and

productive machinery. Each worker is given tasks that are in accordance with his skill and qualification. This division of labor leads to specialization in a task due to repetitive work, which increases his proficiency.

When the business manufacturing plant size is large, the cost per unit decreases. This is a common occurrence. Certain equipments form a very important part for any small-scale business including computers and tractors. These small-scale businesses cannot afford to utilize expensive equipments and hence cannot benefit through technological updates. When a business increases the scale, they can utilize the latest technological updates which cannot be used for decreased output. When the scale of operation has enhanced the need for spare parts, supervisors, and smaller inventories are decreased. Established businesses have the ability to raise money at low costs in the capital market when compared to small-scale businesses. The large-scale companies have the money to promote their products and spread their brand. As the costs of the advertising are shared, the cost of the unit is reduced for a large-scale company when compared to a small-scale business. Another thing to notice here is that large-scale business has the benefit of management personnel who have excellent caliber. However, when the business size increases, they are not able to coordinate and plan their activities. When the market changes or their rivals bring out new products, then these large businesses are at a disadvantage because of their inability to adapt to the new trends in the market. This leads to increase in transportation cost of a unit because the increase the production. The transportation cost includes handling expenses, delivery of goods, inventory costs, and insurance and security expenses. Hence, transportation costs and managerial inefficiencies increase per cost of unit because of economies of scale.

## **Check Your Progress 6**

- 6) What are economies of scale?

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- 7) How the economies of scale affect the production?

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## **2.9 COST FUNCTIONS**

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As we saw in the cost-output relationship, it is vital that the cost of the commodity is directly proportional to the output. A business has to make sure that the output is based on the cost of the materials that it requires. The cost of commodities has a crucial role to play for any business. It is essential that commodities are priced accordingly. Then the consumers will be able to decide on their purchases. It is important that the costs of commodities are priced according to the market situation. Sometimes the market conditions might be suitable for the company, but sometimes it might not be very suitable for the company. That is why businesses will have to come up with decisions that are based on the current market conditions.

### **2.8.1 Optimum Output Level**

The optimum output level is the level (that refers to the size) of output that reduces the average cost of production or for which the average cost is similar to marginal cost.

### **2.8.2 Optimum Inventory Level**

It is a known fact that the entire output can not be sold at once. During these situations the stock of products which can be sold has to be finalized. The optimum inventory level is defined, “as that size of stock for which the average cost of inventory held is at the minimum.” The optimum inventory level has two kinds of costs which are involved namely reorder costs and inventory or carrying

costs. The reorder costs are the telephone charges and the bookkeeping costs which are the fixed costs. The size of the order placed which is the variable costs might vary the reorder costs. The inventory of the carrying costs includes the interest costs on the capital that is borrowed to finance stock and storage costs, etc.

The average costs of stock that is stored can be stated as:

$$AC = K \cdot d/2 + [F, V, D] S/ D$$

Carrying Costs + Reorder Costs

Where,

S = Expected sale.

D = Order quantity to be delivered.

S/D = Number of orders delivered.

F = Average Fixed Costs of delivery.

V = Coefficient of Average Variable Cost of reorder.

K = Average carrying costs.

D/2 = Average inventory held between initial and terminal periods and it is assumed that the demand is spread evenly.

The above is a simple inventory model that gets out interesting results. For example, the inventory must go higher in proportion to the square root of the expected sales. You would want to note that variable costs do not impact the inventory decisions.

### **2.9.3 Optimum Scale**

The optimum scale is given by that value of K (plant size) at which the total cost is the least. The necessary and sufficient conditions for that are following

Necessary Condition:  $dC/dK = 0$

Sufficient Condition:  $d^2C/dK^2 > 0$

Applying these conditions to the cost function ( $C = 0.04 Q^3 - 0.9 Q^2 + (11-K)Q + 5K^2$ ),

We get,

$$= 0 - 0 + 0 - Q + 10K = 0$$

$$\text{or, } K = 0.1 Q$$

$$\text{and } d^2 C/dK^2 = 10 > 0$$

Thus at  $K = 0.1Q$ , total cost is the least. If the firm wants to produce 10 units, its optimum scale equals 1. When it wants to produce 80 units, the optimum plant size is 8 and so on.

#### Check Your Progress 7

- iv) What is the need for cost functions?

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- v) What is Optimum Inventory Level?

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## 2.10 LET US SUM UP

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In this unit we made an attempt to highlight the meaning of supply and its determinants, how production decisions should be taken, the meaning of cost concepts, and the meaning of cost - output relationship. We also explained what economies and diseconomies of scale are and explained about the different cost functions.

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## **2.11 UNIT END EXERCISES**

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- 1) What do you understand by meaning of supply and its determinants? 2) Explain briefly how production decisions should be taken?
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## **2.12 POINTS FOR DISCUSSION**

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If you are a business manager, then how would you regulate your supply? What kind of production decisions you would take?

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## **2.13 ANSWERS TO CHECK YOUR PROGRESS**

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1.11            i) Supply means the ability of a business to produce the required quantity that the consumers need at a particular time for a specific price. It is clear that supply is directly involved to demand.

1) The law of supply indicates that when commodities are supplied in more quantities, the prices will be higher. The remaining parts that are not related to the commodity will be supplied at a lower price. The price of the goods will regulate the demand and the supply. If the price of a commodity is increased, then the business needs to make changes in their production levels so that they can increase their supply.

1.12            i) Companies usually take similar business decisions like should they produce goods or not, the quantity that should be produced, and the inputs that must be used.

1) Inputs refer the land, capital, and labor which go into producing the goods. It should be noted here that it can be variable or fixed. Fixed inputs cannot be immediately altered or changed, while variable inputs

can be replaced immediately within a short notice. Fixed inputs refer to the company's plant. It cannot be altered immediately.

1.13 i) Isoquants are represented geometrically as the production function. Using various combinations, same level of quantity can be produced. When there is continuous variation of labor and capital, a curve can be drawn using these alternative combinations for a given level of output. The curve is the main point of all the combinations which can be done, is known as the Isoquant.

a. The types of Isoquants are Linear isoquant, Input-output isoquant, Kinked isoquant, and Smooth, convex isoquant

b. The types of Isoquants are given below:

Linear isoquant:

Inpt-output isoquant:

3. i) The cost of the products is a very important factor for any business to operate. The cost of the product has to be based on the market conditions. That is why, it is vital to understand the different concepts of costs and how they should be used. The two things that should be clearly understood here is the cost estimates which are produced by financial accounting are not useful to all managerial uses and different market issues require different elements of costs.

iii) ○ Future and Past Costs

○ Incremental and Sunk Costs

○ Out-of-Pocket and Book Costs Theory of Cost ○

Replacement and Historical Costs

○ Explicit Costs and Implicit or Imputed Costs ○

Actual Costs and Opportunity Costs

○ Direct (Separable or Traceable) Costs and Indirect (or Common Nontraceable) Costs

○ Shutdown and Abandonment Costs ○

Private and Social Costs

Fixed and Variable Costs

5. i) A cost output function is a relationship between the value of production inputs that are used by the firm in each period and the corresponding rates of output attained.” The cost functions are getting from a production function that highlights efficient ways of producing goods. The cost-output relationship is very crucial for a business to know

ii) Factors whose quantity can be changed in the short-run are called as a

- variable cost. Thus, the total cost of a business is the sum of its total variable costs (TVC) and total fixed cost (TFC). This is,  $TC = TFC + TVC$
6. i) Economies of scale refer to a situation where output grows proportionately faster than the use of inputs. With prices remaining constant, this leads to lower costs per unit.  
ii) As the size of the firm increases, their planning and coordinating activities become difficult. If the consumer's preferences change rapidly or if rivals introduce a new product, larger firms may be disadvantaged by their lack of flexibility and slow adjustment to market.
  7. i) The cost of commodities has a crucial role to play for any business. It is essential that commodities are priced accordingly.  
ii) The optimum scale is given by that value of K (plant size) at which the total cost is the least. The necessary and sufficient conditions for that are following

Necessary Condition:  $dC/dK = 0$  Sufficient

Condition:  $d^2C/dK^2 > 0$

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## **2.14 SUGGESTED READINGS**

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Joel Dean - *Managerial Economics*, Prentice Hall/Pearson. Rangarajan

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# **UNIT III MARKET STRUCTURE**

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## **Structure**

### **3.1 INTRODUCTION TO MARKET STRUCTURE**

### **3.2 OBJECTIVES**

### **3.3 MARKET STRUCTURE**

    3.3.1 Consumers

    3.3.2 Sellers

    3.3.3 A commodity

    3.3.4 A price

### **3.4 CHARACTERISTICS**

    3.4.1 Classification by the area

    3.4.2 Classification by the nature of transactions

    3.4.3 Classification by the volume of business

    3.4.4 Classification on the basis of time

    3.4.5 Classification by the status of sellers

    3.4.6 Classification by the nature of competition

### **3.5 PRICING AND OUTUT DECISIONS**

    3.5.1 Perfect competition

    3.5.2 Imperfect Competition

### **3.6 METHODS OF PRICING**

    3.6.1 Transfer pricing

    3.6.2 Cost plus pricing

    3.6.3 Incremental/Marginal Cost Pricing

### **3.7 DIFFERENTIAL PRICING**

    3.7.1 Value pricing and prestige pricing

    3.7.2 Going rate and sealed bid pricing

### **3.8 GOVERNMENT INTERVENTION AND PRICING**

- 3.8.1 Reservation
  - 3.8.2 Licensing
  - 3.8.3 Expansion
  - 3.8.4 Foreign Direct Investment
  - 3.8.5 Import and Export Policy
  - 3.8.6 Taxes
  - 3.8.7 Supply of Money
  - 3.8.8 Supply of FOREX
  - 3.8.9 Incentives
  - 3.8.10 Administered pricing
- 3.9 LET US SUM UP
- 3.10 UNIT END EXERCISES
- 3.11 POINTS FOR DISCUSSION
- 3.12 ANSWERS TO CHECK YOUR PROGRESS
- 3.13 SUGGESTED READINGS
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### **3.1 INTRODUCTION TO MARKET STRUCTURE**

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A market can be defined as an area where goods are sold at a particular price. The market is a place that is essential for businesses to function smoothly. When there is no market, then the business might not be able to trade with anyone. Consumers are required to do their shopping in the market. But, when an area does not have a market, then chances of trading with others stands low. The market decides on the pricing of the commodities. It is important that businesses are able to take exact decisions on the market. Otherwise, it might affect their performance. In this lesson, we will be reading about the market structure, characteristics of the market, pricing, and output decisions, methods of pricing, differential pricing, and Government intervention and pricing. For a business to take right decisions about the market, it is important that they know about the pricing and output of their commodities. The methods of pricing also help in making their decisions. Differential pricing and Government intervention and pricing aid the businesses in their pricing decisions. As far as the market goes, the pricing plays a very important role. We will find all about that in this Unit.

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## **3.2 OBJECTIVES**

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After going through this unit, you will be able to

explain the Market Structure

know about Pricing and Outut Decisions

gain an insight to the fundamental concept of managerial economics

learn Methods of Pricing

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## **3.3 MARKET STRUCTURE**

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The market is there is help exchange of goods and services to take place. A market is an area which brings sellers and buyers together. According to

Frederic Bentham, “A market is any area over which buyers and sellers are in such close touch with one another, either directly or through dealers that the prices obtainable in one part of the market affect the prices paid in other parts.” The above definition shows that a must be present inside a building. Another thing to be noticed is that sellers and buyers need not be physically present in the same place. According to Sidgwick, “A market is a body of persons in such commercial relations that each can easily acquaint himself with the rates at which certain kinds of exchanges of goods or services are from time to time made by the others.” In the words of Jevons, “The word market has been generalized so as to mean any body of persons who are in intimate business relations and carry on extensive transactions in any commodity.”

The main feature of a market is that buyers and sellers must come in contact with each other. It can be through devices. It is important that the sellers and buyers are aware about the pricing about the products which are being sold in the market. A market can be termed as a place where the sellers and buyers are in contact with each others. A market consists of four basic components that include consumers, sellers, a commodity, and a price.

### **3.3.1 Consumers**

The consumers are the people who purchase the products. The consumers decide on the market conditions. Consumers are the main people in any market. For example, when a particular commodity is doing well, the sales of it are high. When the sales of the product are not doing well, the market for that is less.

Depending on the consumer reaction to a particular product, the sales and profits of businesses are getting.

### **3.3.2 Sellers**

The market also consists of sellers who sell commodities. These sellers get their supply from the businesses and sell their products in the market. Sellers are also an important part of the market. Without the sellers, the market cannot exist. Though consumers dictate the market conditions, sellers too form a vital part of the market.

### **3.3.3 A commodity**

A commodity or product is the thing that is being sold. For a market to function a commodity is required. Only when a commodity is being sold, the consumer will come to purchase it. When a seller has a commodity to sell the consumer will come to the market to buy it.

### **3.3.4 A price**

A commodity has a price. The products that are sold in the market come with a price. The price of the product depends on the market conditions. Due to market conditions, the price of the products can vary. When the price of the products is less, the demand is high. If the price of the product is more, the demand is less.

## **Check Your Progress 1**

- i) What is the market structure?

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- ii) What are the four basic components of a market?

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## **3.4 CHARACTERISTICS**

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For a market to work efficiently, it is important that the businesses understand their basic characteristics. There is a possibility to identify a limited number of market structures which can be used to analyze decision-making. Though there are many ways to categorize the market structures, the given below characteristics are mostly employed:

### **3.4.1 Classification by the area**

The market is classified by the area in which it is located. There are local markets, regional markets, national markets and international markets. These markets function according to the location of the sellers and buyers. If the market is located in a posh area, then the rent might be high. The pricing of the commodities is usually higher in these areas.

### **3.4.2 Classification by the nature of transactions**

The market can be classified by the nature of transactions that happen. The transactions that happen in the market depend on the size of the market. For example, when the market deals with business supplies, then the transactions can be high. Businesses usually tend to make large purchases. They are the spot market and the future market. The spot market which is happening at the moment. The future market is the market conditions that might happen in the market.

### **3.4.3 Classification by the volume of business**

The market is classified by the volume of business that takes place. They are divided into wholesale and retail markets. The retail market is where the commodities are sold at the retail price. The retail price of the product is based on the current market rate. That price is usually fixed by the retailers. The wholesale market is where goods are sold at a lower price. Unlike the retail market, in the wholesale market, the goods are sold in bulk. Naturally, the price comes down. The wholesale market is mostly visited by retail business people who go there to make their purchases.

### **3.4.4 Classification on the basis of time**

The market can be classified on the basis of time. The period of time is used to classify the market. The time can be very short period, short period and long period. Accordingly there are very short period markets, short period markets, and long period markets. The very short period markets are where the goods are sold for a very short period of time. The time is few hours only. Short periods of time are the time period that is only for a short period of time. The long period markets are where the goods are sold for long periods like ten years or more.

### **3.4.5 Classification by the status of sellers**

The market is classified by the status of the sellers. They are broadly classified into three categories namely primary, secondary, and terminal markets. The sellers have their own status in the market. That depends on the brand name that they have been able to make in the market. Some sellers over time have been able to create a name for them. It is crucial that a seller is able to make a name for them self in the market as depending on that the commodities can be sold. When the seller has a good name in the market, then the commodities in their shop will be sold at a faster rate. If the seller has a bad name in the market, then the products might get sold with some delay. That is why, it is essential the seller is able to get a good name in the market.

### **3.4.6 Classification by the nature of competition**

The most important form of market classification is based on the nature of competition. The buyer-seller interaction is required for a business. The competition in the market depends upon three main factors including substitutability factor, interdependence factor, and ease of entry factor. The interdependence factor is the dependence of the seller and the buyer. Both the seller and buyer should be

interdependent with each other. The ease of entry factor plays a crucial role for a business to survive in the market. That refers to the manner in which consumers can interact with the seller. The ease of entry is also the manner in which the seller is able to maintain the business with the consumer.

### **Check Your Progress 2**

- i) List the characteristics of the market.

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- ii) What are characteristics of the market?

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## **3.5 PRICING AND OUTUT DECISIONS**

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The market structure is classified in two parts known as the number of businesses that produce the product and the nature of the commodity that has been produced by the businesses which is homogeneous or differentiated. The price elasticity of demand for a business product solely depends on the number of competitive businesses which are producing similar products. The level of substitution that can be done between products produced by a business and other products manufactured by rival firms also is needed. In different markets, different categories of the price elasticity of the demand are done by a single business.

### **3.5.1 Perfect competition**

The perfect competition is when a large number of businesses are manufacturing a single product. As the maximum output a single business can manufacture is relatively very small for the total demand of the industry, it is not possible for a firm to affect the price by varying either its supply or output. When many

businesses producing a product under excellent, the single business is in a position to influence the price of the product and therefore the demand curve facing it will be horizontal at this level of the current price in the market. The price elasticity of demand for a single firm will be infinite.

### **3.5.2 Imperfect Competition**

Imperfect competition is a crucial market category wherein single businesses exercises control over the price to a smaller or larger degree that depends on the degree of imperfection that is present in a case. Control over the price of a product by a business is an uncommon thing and the existence of imperfect competition is caused either by the product differentiation or due to few businesses. When companies want to keep their own prices, then there can be violations of rules. Based on the market conditions the prices are raised or decreased. That is why companies don't raise the price of their products without referring the market. There are several categories of imperfect competition. Monopolistic competition is the first sub-category of imperfect competition. In monopolistic competition a large number of businesses manufacture different products which are close substitutes of each other. The competition ensures that there is not a lot of competition between the business as the products which are being produced are almost similar. The second sub-category is oligopoly. If it is without product differentiation it is also known as pure oligopoly. Under it there is competition among few businesses that manufacture homogeneous or identical products. The businesses have some competition between them. The few businesses make sure that each of them has some kind of control over the price of the product which is being manufactured. During this time the demand curve will be downward that highlights that the price elasticity of demand of a business is not infinite. Differentiated oligopoly is the third sub-category. Differentiated oligopoly occurs when there is competition between businesses manufacturing differentiated products that resemble with one and other. Here the businesses will control the pricing of individual products which are being produced by them.

### **Check Your Progress 3**

- i) What are the pricing and output decisions?

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- ii) What is the perfect competition?

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## **3.5 METHODS OF PRICING**

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### **3.6.1 Transfer pricing**

Many large vertically integrated businesses. The vertically integrated refers to the operation of a firm having more than one stage of the production process). They are decentralized and make semiautonomous profit center. In other words, the business has many divisions. One division of a firm sells its product to another division of the same firm. For example, the Reliance Industries have vertically integrated manufacturing chain from naphtha to textiles. The oil refining unit which produces naphtha is also used to manufacture polymers like polypropylene and polyethylene. During a later stage the filament yarn and polyester staple fiber are produced by using these polymers. These are used to produce the fabric again. The transfer price is the rate at which the transfer takes place. Mostly there is an issue with the pricing of the produce as one unit can provide the intermediate good for the other. In this situation, the finance earned for one unit depends on the rate which it has been priced. When it has been priced as a high rate, the profits will increase during the earlier stage of production itself. When the products have been priced low, the benefits will happen at the later stages of production.

### **3.6.2 Cost plus pricing**

Cost plus pricing comes in many kinds of forms. There are two steps which are involved in cost plus pricing. The first step takes place when the business is able to find out the cost per unit of the product. The cost per unit is defined as the variable

production and marketing cost per unit of output plus the average overhead cost.

$$AC = AVC + AFC \quad AVC =$$

$$TVC/Q \quad AFC = TFC/Q$$

The cost per unit of the product depends on the output. The business should be able to take it as the base price. The businesses use it for calculating the capacity percentage that occurs between two-thirds and three-quarters.

In the second step, profit margin or a markup is added along with the average cost that is estimated. This profit margin is in percentage form and includes the costs which come as excellent returns. The profit margin is found out by demand competition and elasticities. Markups are usually lower where the competition is intense and demand is high. The markup can be written as follows:

$$\text{Mark-up} = \frac{\text{Selling Price} - \text{Cost}}{\text{Cost}} \times 100$$

### **3.6.3 Incremental/Marginal Cost Pricing**

Incremental analysis requires output decisions and correct pricing. A business must accept new orders, alter the price of a product, and introduce a new product if the incremental revenue is greater than the incremental costs. Incremental/marginal/direct cost pricing indicates that the rate of a product is the incremental cost of production. If the remaining capacity comes in few days time, the overhead costs are irrelevant in finding out if a business must take some efficient action. Since overhead or fixed costs have been taken care of efficient actions that can increase the returns brings in more profits to the business. The long term actions must be taken seriously if the demand to increase production comes up when a new product is introduced.

#### **Check Your Progress 4**

- i) What are methods of pricing?
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- ii) What are the different types of methods of pricing?
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### **3.7 DIFFERENTIAL PRICING**

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According to the current market conditions when the prices are set, it is known as differential pricing. When high prices are set during launch of a product to skim the market is called price skimming. As the market is better for the product, the pricing are decreased. You will see that the company DuPont follows this practice. The company estimates the best price to set for the new products before it is released in the market. The products can be includes nylon, Teflon, and cellophane. DuPont has a pricing that allows the product to be able to adopt the new material. The market price of the product is reduced each time the sales slow. This way, the company is able to skims the highest revenue through different market segments. When certain conditions are fulfilled market skimming is profitable for the firm.

Sufficient demand from buyers.

Cost of producing is low so that high price can be asked in the market.

If initial price is high, it should not give rise to more competitors.

High price should showcase that the product is superior.

When prices of a product are lowered so that a market share is secured, it is referred to as penetration pricing. For example, Texas Instruments follows market penetration pricing. Texas Instruments sets low prices of products which are manufactured from

its large plant. The company makes sure that it has a large market share. When it experiences reducing costs, prices are cut as further shares fall.

The following conditions are best for setting a low price.

When the market is price sensitive and low price improves better market growth.

Distribution and production costs decrease with increase in production.

Low pricing decreases the potential competition.

### **3.7.1 Value pricing and prestige pricing**

When quality goods are sold at reduced lower prices than the previous prices, it is called as value pricing. Some producers redesign a product to improve the quality and lower the costs. This helps them to get more profits. For example, PepsiCo Inc.'s Taco Bell chain had its fourth pricing strategies sales jump 15 per cent in 1990 that was due to a value menu card that offered 14 items and 59-cent tacos for 79 cents. This strategy of the company made others to follow suit. McDonald's and Wendy are brought out a value menu providing similar pricing. Companies like Cartier have to do something about their pricing. Prestige pricing is also called as image pricing. In prestige pricing, prices are set high so that consumers who want an image in society because of that product will purchase it. High end cars are priced high and consumers purchase them as they provide them with that luxury.

### **3.7.2 Going rate and sealed bid pricing**

The going rate pricing is the price that has been set for a new product that depends on the current prices of similar products that exist in the market. When similar products are not present, then comparable products are taken and prices are set accordingly.

### **Check Your Progress 5**

- i) What is differential pricing?

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- ii) What are Value pricing and prestige pricing?

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## **3.8 GOVERNMENT INTERVENTION AND PRICING**

The government plays a crucial role in affecting the business and the prices as it regulates the business. The government not only decides the rules but also the implementation of the rules.

The government affects the pricing in following manner:

### **3.8.1 Reservation**

The government limits the investments by parting the industry as small scale, public and co-operative sector. After liberalization Petroleum, Telecommunication, Coal, Power, etc. came under the Public Sector. But liberalization has brought new investment opportunities for private sector and today only two sectors, Railways and Atomic energy are public sector.

Through reservation the government can increase or decrease the competition and also affect the level of investment which can heavily react on the pricing.

### **3.8.2 Licensing**

For a business to operate, it requires a license from the government. A few years back any new business required a license and the government used to keep a tight control on the production in the private sector. Today, some industries need license to function. However in few cases industry should acquire licenses from different other authorities as Pollution control board, ISI, Ministry of Environment and Forest, Food and Drug Administration etc. to operate. The higher the level of licensing in a the

higher the government intervention in the pricing.

### **3.8.3 Expansion**

For a business to expand, it needs the government's approval. The government can provide the opportunity for a business to expand but at the same time also limit its expansion. Through MRTP Act, the government has restricted the expansion of large businesses. The level of expansion can be decided by the government.

### **3.8.4 Foreign Direct Investment**

The government finalizes if an MNC company can invest in a country or not. Due to the government's policy there are few MNCs in India. Large corporations including IBM and Coca Cola left India due to the government FDI policy. Today, one can find MNCs in many sectors including insurance, petroleum, banks, and publication. However, in the retail sector, there are very few due to the FDI policy of the government.

### **3.8.5 Import and Export Policy**

The import and export policy are also part of the government. Until the year 1991, strict import and export policy was followed. Today, due to changes in the import and export policy, it has become easy. Many businesses have been affected by the import and export policy. The toy industry was mainly affected. Raw materials decrease the prices.

### **3.8.6 Taxes**

Through taxes the government regulates the industry. The government mostly imposes high taxes on the industry. Products like ACs, automobiles, and the like have no tax on the production of products as it is reserved for small scale industry.

### **3.8.7 Supply of Money**

The government decides on the supply of money. The demand depends on the purchasing power of the consumers. Over the past years the interest rates have been decreased which have provided better purchasing power to consumers.

### **3.8.8 Supply of FOREX**

The government not only regulates the import and export through policy decision but also controls it through control of supply of foreign exchange.

### **3.8.8 Incentives**

The government provides incentives. Subsidies are provided for different schemes to small scale sector.

### **3.8.9 Administered pricing**

The government offers support prices for agriculture produces and decides on the maximum price which a drug can be sold.

#### **Check Your Progress 6**

- i) What are ways in which the Government intervention and pricing affects the industry?

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- ii) Which among the Government intervention and pricing is important? and why?

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### **3.9 LET US SUM UP**

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In this unit we read about the market structure, characteristics of a market, and pricing and output decisions. The next important concept that is needed in a market structure is differential pricing and government intervention and pricing.

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## **3.10 UNIT END EXERCISES**

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- 1) Explain the market structure and characteristics of a market. Explain them all in brief
  - 2) What are differential pricing government intervention and pricing?
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## **3.11 POINTS FOR DISCUSSION**

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What do you feel about the market structure and characteristics of a market?

## **3.12 ANSWERS TO CHECK YOUR PROGRESS**

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- 1)
  - i) The main feature of a market is that buyers and sellers must come in contact with each other. It can be through devices. It is important that the sellers and buyers are aware about the pricing about the products which are being sold in the market.
  - ii) A market consists of four basic components that include consumers, sellers, a commodity, and a price.
2.
  - i) Though there are many ways to categorize the market structures, the given below characteristics are mostly used Classification by the area, Classification by the nature of transactions, Classification by the volume of business, Classification on the basis of time, Classification by the status of sellers, and Classification by the nature of competition.
  - ii) Classification by the area, Classification by the nature of transactions, Classification by the volume of business, Classification on the basis of time, Classification by the status of sellers, and Classification by the nature of competition.
3.
  - i) The price elasticity of demand for a business product solely depends on the number of competitive businesses which are producing similar products.
  - ii) The perfect competition is when a large number of businesses are manufacturing a single product.
4.
  - i) Transfer pricing, Cost plus pricing, and Incremental/Marginal Cost Pricing.
  - ii) Transfer pricing  
Cost plus pricing

## Incremental/Marginal Cost Pricing

5. i) Differential pricing is about setting the prices in a different manner based on the current market conditions.
  - ii) Value pricing refers to selling quality goods at lower rates than the previous price. Prestige pricing or image pricing refers to deliberately set high prices to attract prestige oriented consumers.
6. i) Reservation,Licensing,Expansion, Foreign Direct Investment,Import and Export Policy,Taxes,Supply of Money,Supply of FOREX,Incentives,Administered pricing.
  - ii) Through taxes the government regulates the industry. The government mostly imposes high taxes on the industry. Products like ACs, automobiles, and the like have no tax on the production of products as it is reserved for small scale industry.

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### 3.13 SUGGESTED READINGS

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Joel Dean - ***Managerial Economics***, Prentice Hall/Pearson. Rangarajan - ***Principles of Macro Economics***, Tata McGraw Hill. Atmanand, ***Managerial Economics***, Excel, (2001).

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## **UNIT IV PROFIT**

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### **Structure**

#### **4.1 INTRODUCTION TO PROFIT AND POLICIES**

#### **4.2 PROFIT**

- 4.2.1 Gross Profit and Net Profit**
- 4.2.2 Normal Profit and Supernormal Profit**
- 4.2.3 Accounting Profit and Economic Profit**
- 4.2.4 Risk and Uncertainty Theory of Profits**
- 4.2.5 Profit as a Reward for Market Imperfection and Friction in Economy (Dynamic Theory of Profit)**
- 4.2.6 Innovation Theory of Profits Profit Analysis**

#### **4.3 PROFIT POLICIES**

- 4.3.1 Straight Line Method**
- 4.3.2 Declining Balance Method (DBM)**
- 4.3.3 Sum of the Year's Digits Method (SYDM)**
- 4.3.4 Valuation of Stocks**

#### **4.4 PROFIT PLANNING AND FORECASTING**

- 4.4.1 Profit Planning**

- 4.4.2 Profit Measurement**

#### **4.5 COST VOLUME PROFIT ANALYSIS**

#### **4.6 INVESTMENT ANALYSIS**

- 4.6.1 Meaning and Significance of Capital Budgeting**

#### **4.7 ANSWERS TO CHECK YOUR PROGRESS**

#### **4.8 SUGGESTED READINGS**

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### **4.1 INTRODUCTION TO PROFIT AND POLICIES**

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The main objective of learning profits and profit policies is to understand the meaning, nature and various theories of profit. After studying this lesson the individual will be able to understand the exact meaning and nature of profit. They will be able to differentiate between the various kinds of profits including normal and

supernormal profits, accounting and economic profits, and gross and net profits. The individual can describe risk and uncertainty theory of profit, dynamic theory of profit, innovation theory of profit, etc. It is essential that the individual understand the need for a business to make profits. In reading the pricing and output decisions of the business firm, the managers mostly depend on the methods for profit maximization. The difference which comes between the total cost and total revenue in for a business is the company's strategies to increase the constraints imposed by consumer demand and production costs. Readers would have read about them in the earlier units. The profit analysis allows the business managers to forecast the behaviors of business in the actual world. Profit analysis is very useful in understanding the price and output behaviors of businesses in response to the changes that come in wage rates, tax rates, availability of resources, and the like.

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## **4.2 PROFIT**

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Profit is the result of a business that is able to make more money than it has invested in their raw materials. There is a difference between profits and returns as profit is the remaining income. There are much greater fluctuations in profits than in the rewards of other factors and profits are mostly negative unlike wages, rent, and interest which are positive. "Profit means all excess of income over costs and this includes the earnings of self-used factors." The entrepreneur's own land, capital and his own labor work are known as implicit wage, implicit interest, and implicit rent. In managerial economics, profit is known as the money that comes back as a result of excellent financial decisions which have been made by the business managers.

There are several forms through which profits can be shown:

### **4.2.1 Gross Profit and Net Profit**

The gross profit for a business is when the gross profit income is available after making payments to all who are working on contract. In other words, it is the excess of revenue over the charges and the explicit payments.

$\text{Gross profit} = \text{Total Revenue} - \text{Explicit costs}$

Net profit is the remaining balance of income after making payments to all contractual and non-contractual payments to the factors of production. It is also called as economic profit or pure profit

#### **4.2.2 Normal Profit and Supernormal Profit**

Normal profit is the portion of the profit that the business requires to stay functioning. The minimum resource which is needed for a business to stay in operation is known as normal profit. A business can get normal profit only when average revenue (AR) is equal to average cost (AC).

$$(AR = AC)$$

Super normal profit is also known as abnormal profit. It is considered as returns of a business which takes any form of the normal profit. The super normal profit is the excess of the money when all the payments have been finished. If the pricing is higher than the average cost, then the business manager reaches super-normal profits.

#### **4.2.3 Accounting Profit and Economic Profit**

Accounting profit is the revenue obtained during the period minus the cost and expenses incurred to produce the goods responsible for getting the revenue. Accounting profit = Total Revenue – The cost involved in producing and selling. However, this theory is heavily not considered because it does not take into consideration other expenses like the entrepreneur's wages, rental incomes on self-owned land and interest on self-capital. The self - capital is also known as imputed cost. The economic profit is taken on products that contain both implicit costs and explicit costs.

Economic profit = Total Revenue – Explicit costs + imputed costs. OR

Economic profit = Accounting profit - Imputed cost. The theories of profits can be explained.

It is the reward for taking risks.

It is the consequence of imperfections and frictions in the economy.

It's the reward for innovation which is successful.

Profit as a payment for organizing other factors of production.

Some economist's feel that profits are same as rent. Rent is defined as a differential surplus in managerial economics. While the rent refers to the area, profit is the result of the production that has taken place in a business. Rent is due to the fact that not all lands can produce the same. Similarly, profits arise due to differential factors in talent and ability of the entrepreneur.

#### **4.2.4 Risk and Uncertainty Theory of Profits**

This theory envisages that profit is a reward paid to the organization for undertaking risks. Though business managers do not like to take risks when operating their productions, those who take calculated risks are rewarded with profits. The larger the risks that are taken the larger the profits are got. Since business operates under conditions of uncertainty, the risk premium, in the form of profit is to be paid.

#### **4.2.5 Profit as a Reward for Market Imperfection and Friction in Economy (Dynamic Theory of Profit)**

When an economy is static the demand or supply does not change. The demand for a commodity depends upon the size of the population, incomes, consumer's tastes, and substitutes of commodities. During a static equilibrium, the commodities are supplied. The cost of production and the price of the product will never change when the supply and demand do not change. "In a static equilibrium the price of the product will be equal to the average total unit cost of production including normal profit." However, in a dynamic world, the prices and cost of production never remain constant. In a dynamic economy the factors keep changing that is the result profit or loss.

#### **4.2.6 Innovation Theory of Profits Profit Analysis**

Prof. J B Clark. Prof. Schumpeter, attributed profits to dynamic changes in the production process due to the introduction of modern science and technology of production techniques. Risk plays no part in this theory and profits are solely attributed to dynamic development. Innovation may bring about changes in methods of consumer tastes increasing national output more than an increase in costs. The increased net output is the profit out of innovation.

## **Check Your Progress 1**

What is profit?

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What are the types of profit?

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## **4.3 PROFIT POLICIES**

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When a business has been in operation for some time the machinery and equipments might require maintenance and replacement. Few of the machinery might need to be replaced as they cannot be in operation anymore. The business manager calculates the amount that will be got against the income of the business for that particular year, which is known as depreciation. It is vital that the depreciation amount is found out as the business can replace the machinery before it completely becomes useless. It should be noted here that the value of depreciation varies depending on the business. The heavy industries including air transport, iron and steel, railways, and others always ensure that the depreciation charges are given. As the depreciation value has to be presented during the profits various methods to calculate depreciation are used.

Some of the methods have been shown below:

### **4.3.1 Straight Line Method**

In the straightly line method, the equipment gets worn as time goes by. It might however get worn out during various stages when compared to the other stage. If there is no scrap value of the equipment, then the yearly depreciation is calculated by dividing the initial value of the equipment by the number of years that was estimated

for it to be in operational condition. When the equipment has scrap value, then that is removed from the initial cost and then divided by the estimated life. The depreciation charge that is calculated against the total income of the business is kept apart from being credited to the depreciation fund. This method does not include the repair cost of the equipment which can increase because of severe maintenance.

For charging depreciation there are two methods involved. First, the opportunity cost of the machinery, which is the best use of the equipment that is lost when it is put to use. Second, the time remaining for the equipment which is found out on the basis of the depreciation charges. The two measurements are required for the businesses to find out as the opportunity cost is calculated for making profits. The second value is needed to calculate the replacement costs of the profits that can aid in the financial problems of administering the budget.

#### **4.3.2 Declining Balance Method (DBM)**

The declining balance method (DBM) can be shown as below:

$$D=100 [1 - x/ S]/C 1 - [n [S/C]]$$

D stands for percentage of depreciation

S stands for residual value of the asset

C stands for initial cost of the asset

N stands for estimated life of the asset in years

#### **4.3.3 Sum of the Year's Digits Method (SYDM)**

The sum of the year's digits method (SYDM) is almost same as the declining balance method. Using this method, the business manager can find out the total cost of operation that is required for the firm. The only difference is that, the yearly rate of the depreciation value keeps changing while the book value remains the same.

#### **4.3.4 Valuation of Stocks**

The valuation of stocks is the method that is needed to find out the total stock value. The total stock value should be found out for a business as they need to know the total amount of stock that they have remaining, the total amount of stock which has been sold. Various methods are used to calculate the valuation of stocks. The First in First Out method (FIFO) is used. FIFO is where the products which have been bought first are sold first. The Last in First Out method (LIFO) is also used. The products which have been purchased in the end are sold first.

#### **Check Your Progress 2**

iii) What are the commonly accepted methods of depreciation?

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iv) What is the valuation of stocks?

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#### **4.4 PROFIT PLANNING AND FORECASTING**

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In today's modern world which is dynamic, it is often noted that the policies and attitudes of businesses are not the same. Economic theory makes an assumption that the maximization of profit is the main objective of a business. Today profit maximization refers to the long run periods to managements rather than the business owner's financial capability. The managements have been able to realize that the business can not always aim to make maximum profits to revenue and marginal cost. They should set targets that can help them achieve profits. They should do that using the given below considerations:

- To be able to get the top industry management.
- To stay ahead of the competitors.
- To be able to prevent governmental restraints.
- vii) To maintain goodwill among consumers.
- To be able to control the increases in wages.

To avoid risks that threatens the existence of the business.

Modern businesses feel that they have a social responsibility and an obligation to society and therefore they are ready to sacrifice profits during the short run periods. The managers want to limit profits in order to maximize their own benefits either by non-diluting control over the industry or by the desire to maintain pleasant working conditions. Today firms set "profit standards" through a percentage of sales or a reasonable return on investments. To discourage potential competitors, return on investments seems to be relevant profit standard if all new businesses have similar cost standards. The business owner feels that it is the best method for profit standard because the ratio of profits to sales varies very widely among firms. Capital is formed by attracting investments (profit is a bait to attract capital along with the interest rates) and also by getting back the earned profits. Hence, the criteria to be implemented depending upon the mode applied to achieve the above.

It is necessary to set different standards for different companies and purposes, since they give widely varying results depending on market conditions. The business firms pursue a variety of profit policies to achieve different goals like long run survival, to maintain safety margins, to introduce leisure as a variable, to maintain financial control of the firm, to maintain liquidity, to earn a satisfactory return or to maximize sales subject to profit constraints, and the like.

#### **4.4.1 Profit Planning**

A sound business must always aim at consistently getting profits in the midst of risk and uncertainties in the market, which are a result of the dynamic nature of consumer needs, the peculiar nature of the competition, and uncontrollable nature of the costs. Thus, planning for profit is absolutely necessary, and demands a thorough understanding of the relationship between output, cost, and price. The break even analysis can explain this relationship. It is also possible to derive managerial actions to maintain and increase profitability.

#### **4.4.2 Profit Measurement**

For most firms, the most practical measure of whether they are making adequate profits is the rate of return on capital which is calculated as:

Rate of return on capital = Net profit/Fixed capital x 100

If this figure is too low then the firm would have to question its profitability and how it can be improved and whether its capital can be invested more effectively elsewhere. Profits are the excess of total revenue over total costs, where total costs include both explicit and implicit costs.

**Mathematical Derivation of the Equilibrium of the Firm** The firm aims at maximization of its profit

$$p = R - C \quad p =$$

Profit

$$R = TR, C = TC \text{ Then } R$$

$$= f_1(X)$$

$$C = f_2(X), \text{ given the price } P$$

It is clear, that profit planning and forecasting are a must in the current market situation.

#### **Check Your Progress 3**

- viii) What are the considerations for getting profits for a business?

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- ix) What is profit planning and profit measurement?

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## **4.5 COST VOLUME PROFIT ANALYSIS**

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The Cost-Volume-Profit (CVP) analysis helps the business management to find out the relationship of costs and revenues to profit. The aim of a business is to make profits. Profit depends upon many factors, with the most important being the costs of the manufacturer and the volume of sales effected. Both these factors are interdependent. The sales volume is crucially dependant on the total production. That is completely related to the cost of production.

It can be said that the cost of production is the operating cost that depends on the following:

The amount of commodities that have been produced

The commodity mix

The efficiency of the business

The methods which have been used during the production

The space of the plant

Out of these, the amount of commodities that have been produced is the most crucial factor which can alter the costs. The costs can be divided into fixed costs and variable costs. The changes in the amount of commodities that have been produced happen. That occurs due to factors that a business cannot control. The business manager must be able to predict a correct amount which can help him or her to understand the affects on profits due to these factors. That is provided by cost-volume-profit analysis. A business manager can clearly understand the effects of the outside factors which can affect his or her volume of sale that in turn which can increase or decrease the profits. The fixed costs of the products will not change for a particular period of time. The volume of a quantity that has been produced and the total sales that have been done will not affect the price. When there is fixed cost the cost allocation of commodities becomes a problem. There is no relation to the production which has taken place in the business in fixed costs. Variable costs are however related to the production that takes place in a business. When the production increases, the cost of the commodities increases or decreases. When the production decreases, the cost of the commodities can increase or decrease. To understand the behavior of costs and

CVP relationship, proper definition of volume or activity is required. Volume is the sales that have taken place for a business. It can be expressed as a percentage of large sales, unit of sales, etc. The ability to produce commodities by a business is the percentage of maximum production, and machine hours.

Analysis of cost-volume-profit involves the given below variables:

- The sales of a business
- The cost of the commodities
- The commodity mix
- The variable cost of the commodity
- The total fixed costs

It is essential to know the objectives of cost-volume-profit analysis. Why does a business need cost-volume-profit analysis?

The objectives are as follows:

It is necessary to be able to predict the profits correctly. The relationship between costs and profits and volume has to be understood to find out the cost-volume-profit.

The cost-volume-profit analysis is vital to set budgets which are flexible.

It is required to help in evaluating the performance of the business. The effects on cost volume changes are needed to be calculated to review costs incurred and profits achieved.

The price of a commodity is vital to fix and stabilize the volume of production. The cost-volume-profit analysis helps in calculating the prices according to the market.

The overhead costs should be determined beforehand itself that depends on the production of the commodities. The cost-volume-profit analysis is required to find out the overhead costs that must be priced for a commodity at the different operation levels.

#### **Check Your Progress 4**

- iv) What is Cost-Volume-Profit (CVP) analysis?

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- v) What are the objectives of cost-volume-profit analysis?

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## **4.6 INVESTMENT ANALYSIS**

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The survival of a business in this competitive market involves a lot of monetary and nonmonetary effort. One of the best strategies would be to invest in new opportunities with the changing time. However, often the capital may be scarce and this calls for the allocation in such a manner which can obtain maximum returns from the capital invested. Capital is an expensive thing which is why the basic objective of the business owner would be to maximize the profits. The money can be used for products where the excess of revenue over investment is the maximum over a period of time. This process can be applied to many areas.

### **4.6.1 Meaning and Significance of Capital Budgeting**

Capital budgeting deals with the planning and control of capital expenditure. Capital expenditure is defined as one which involves the current outlay of the cash in return for an anticipated flow of benefits that might come in the long run. The decision of the business to invest its current finances in an efficient manner in long-term productive with expectations of benefits over a long

period is capital expenditure. One can also say, capital budgeting refers to the “process of planning capital projects, raising funds and efficiently allocating resources to those capital projects.” Examples of capital projects include new machines, automobiles, and trucks. It can be also said that outlays for research and development and advertising programs are also capital expenditures when the returns on those projects will flow for more than one year. Capital budgeting is used not only to plan for the replacement of depleted capital and equipment that is necessary for expanding the plant but also in planning major advertising campaigns, employee training programs, research and development, decisions to purchase or rent production facilities or equipment and other productions which can provide profits.

Businesses divide investment projects as the following:

**Replacement:** When the machinery has to be replaced, the money that is required to purchase them is called as a replacement.

**Cost reduction:** When machinery that can be used, but are replaced with better equipments are called as cost reduction.

**Output expansion of markets and products:** When money is used to expand a business due to high demand is called as output expansion.

**New product expansion and markets:** The money is used to produce, sell, and develop new products is called as new product expansion.

**Government regulation:** The money that is utilized in the business is done according to the government regulation.

When there are investments which have to be done for long-term standards are required to be followed.

Five reasons are there why capital budgeting decisions are vital signs for the businesses.

v) As capital budgeting is a long-term one, there might be situations where the funding can sink. Sometimes capital budgeting decisions cannot be taken without losing some money. The implications have to be understood by the businesses to get more profits.

vi) Since the money that is required in the business for production is very large, the businesses need to know that it can impact the profits of the firm.

- vii) Capital budgeting decisions are not limited to only the current fiscal year, but also the near future also. The impact on the profits cannot be quickly identified and found out.
- viii) Capital budgeting decisions are important for any business. Their reputation is on hold here. Business managers should learn the art of making good returns.
- ix) Capital budgeting decisions come with a lot of uncertainties. It is important that the analysis of the profits, the forecasting of the commodities and proper judgments are taken which can increase the profits of a business.

#### **Check Your Progress 5**

What is the meaning and significance of capital budgeting?

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What are the five reasons why capital budgeting decisions are significant for both the company owners and managers of a business?

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#### **4.7 ANSWERS TO CHECK YOUR PROGRESS**

i) “Profit means all excess of income over costs and this includes the earnings of self-used factors.”

Normal Profit and Supernormal Profit, Accounting Profit and Economic Profit

i) Straight Line Method, Sum of the Year's Digits Method (SYDM)

The valuation of stocks is the method that is needed to find out the total stock value.

3. i) To attain industry leadership, to Forestall potential competition, to prevent governmental intervention and restraints, to maintain and foster consumer goodwill, to control wage increases, to avoid risks threatening the survival of the business firms, to maintain the liquidity of the business firm.
- ii) Getting profits in the midst of risk and uncertainties in the market, the rate of return on capital

4. i) The Cost-Volume-Profit (CVP) analysis helps the business management to find out the relationship of costs and revenues to profit.
- ii) It is necessary to be able to predict the profits correctly. The relationship between costs and profits and volume has to be understood to find out the cost-volume-profit.

The cost-volume-profit analysis is vital to set budgets which are flexible.

It is required to help in evaluating the performance of the business. The effects on cost volume changes are needed to be calculated to review costs incurred and profits achieved.

The price of a commodity is vital to fix and stabilize the volume of production. The cost-volume-profit analysis helps in calculating the prices according to the market.

- 2 i) Capital budgeting deals with the planning and control of capital expenditure.
- ii) a. As capital budgeting is a long-term one, there might be situations where the funding can sink.

7. Since the money that is required in the business for production is very large, the businesses need to know that it can impact the profits of the firm.

8. Capital budgeting decisions are not limited to only the current fiscal year, but also the near future also.

9. Capital budgeting decisions are important for any business. Their reputation is on hold here.

10. Capital budgeting decisions come with a lot of uncertainties.

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## **4.8 SUGGESTED READINGS**

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Joel Dean - ***Managerial Economics***, Prentice Hall/Pearson. Rangarajan - ***Principles of Macro Economics***, Tata McGraw Hill. Atmanand, ***Managerial Economics***, Excel, (2001).

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# **UNIT V NATIONAL INCOME**

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**5.1 INTRODUCTION**

**5.2 OBJECTIVES**

**5.3 NATIONAL INCOME**

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## **5.1 INTRODUCTION**

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It is crucial that one understands the national income accounts as they provide regular estimates of Gross National Product or the GNP, which is the basic measure of the economy's ability in producing goods and services. National income is the total income of a country when compared to the income of an individual. However, all the income earned by individuals cannot be included in the national income and all the income generated by an economy cannot be received by the individuals of the country. Businesses which produce goods and services provide money to their workers in the form of wages, rent, interest and profit is known as Gross National Income or the GNI. The national income can be said as the following:

National income is an aggregating value concept: it makes use of the value determined by the measuring rod of money as the common denominator for the purpose of aggregating the diverse output resulting from different types of economic activities.

National income is a flow concept: it represents a given amount of aggregate production per unit of time, conventionally represented by one year. Thus, national income usually relates to a particular year and indicates the output during that year.

National income represents the aggregate value of final products rather than the total value of all kinds of products produced in the economy.

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## **5.2 OBJECTIVES**

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After going through this unit, you will able to

- Get accustomed to the business cycle
- Learn about different sorts of inflation and deflation
- Analyze the poise of payment
- Learn about the monetary and fiscal policies

### **5.3 NATIONAL INCOME**

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National product is the measure of the volume of all goods and services that is produced by an economy in a period of time. The measure covers all the goods and services that are produced by the individuals of a country. The goods include all items which can be produced like livestock products, forest products, agricultural crops, mineral products, manufacturing of various consumer items like machinery, transport equipment, consumption. The construction of roads, dams, buildings, etc. can be also taken. The services include medical and educational services, financial services, transport, and trading services, defense services, sanitary services, etc. All the final goods and services which have been produced during the given period are included whether they are marketed or produced for individual use only. Some products of agriculture and forestry are used for individual consumption of the producers and cannot be taken as values. The rental of buildings can be also taken that are owned and occupied by the owners themselves. Own account construction activities can be included. The illegal activities including smuggling and black marketing are excluded from the national income. Another important feature of the measure is that it is a specified value of output at each stage of producing is taken into account when measuring the total. A distinction is made between final and intermediate products. The unduplicated total is confined to a value of final products which excludes all the intermediate products.

For example, if the production process during a specified time involves the production of wheat, its milling into flour and baking of bread sold to consumers, then the value of the national output should be equal to the final value of the bread. It cannot take the separate value of the wheat and flour which have been used in the course of producing bread. Thus the national product is not the total value of goods and services produced, but the final products which have been produced, excluding the value of the inputs and services used. This value added by the production in a business enterprise during a specific period of time is an important national income theory. The national product includes the value of all final goods and services arising out of economic activity while the national income is the sum of all incomes that is got from economic activity. These two concepts are synonymous. Since the

production of goods and services is due to the capital, labor, raw material and other intermediate inputs, which are primary resources, the process generates income. For example, the total product that is produced by business making steel can be got by adding the value of the final products and then removing the value of intermediate inputs. The value added includes the income that has been got accrues in the course of production. The total income is given by rent + wages/salaries + interest + profits.

The value added is equal to the income that has been got from the factors of production. It can also be seen as the income that comes from the producing firms to factors of production. National income includes only those incomes got directly from the current production of goods and services, which are called factor incomes. Other forms of income such as educational grants, old age pensions, unemployment benefits, etc., cannot be taken as payments to production. Payments to the goods or services which are received in return are known as transfer payments. The production that takes place is spent on consumption of its individuals or for additions to fixed assets within the country. It can be said production can also be measured by including the expenditures of the money received by selling the finished commodity and services. The national expenditure is the total of expenditure of all economic agents namely, households enterprises and government. The expenditure on final goods and services might be for consumption purposes. Some of them include consumption of food, clothing, shelter, services, etc., or for capital formation such as an addition to buildings, plant, machinery, transport equipment, etc. While some goods cannot be sold immediately and stocked up, some are sold once they are produced. The national income can be measured in three different ways including the angle of income generation, the final utilization, and from the angle of production. The total operations of an economy include three basic economic functions including distribution, disposition, and production.

### **Check Your Progress 1**

- i) What is the national income?

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- ii) What do you understand by the national income?

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### **5.4 BUSINESS CYCLE**

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The business cycle or economic cycle refers to the fluctuations of economic activity that takes place in a country for a specific period. The business cycle involves shifts as time goes between periods of rapid growth of output and periods of decline. These fluctuations are often measured using the real gross domestic product. Though called business cycles, these fluctuations in economic growth and decline do not follow a predictable periodic pattern. Wesley C. Mitchell, who was one of the founders of the National Bureau of Economic Research (NBER) in 1920, established a working definition of the business cycle along with Arthur F. Burns that states, “Business cycles are a type of fluctuation found in the aggregate economic activity of nations that organize their work mainly in business enterprises: a cycle consists of expansions occurring at about the same time in many economic activities, followed by similarly general recessions, contractions and revivals which merge into the expansion phase of the next cycle; this sequence of changes is recurrent but not periodic; in duration business cycles vary from more than one year to ten or twelve years; they are not divisible into shorter cycles of similar character with amplitudes approximating their own.”

Thus, a business cycle is not a regular, predictable, or repeating phenomenon like in the case of the swing of the pendulum of a clock. Its timing is random and unpredictable.

A business cycle is identified as a sequence of four phases:

- Revival
- Expansion
- Recession
- Contraction

Expansion refers to the prosperity in the economic activities. Expansion starts as a business manager expects increase in profits in the very near future. Expectations of profits bring about investment in the economy. This investment generates the employment and demand for raw material, which further increases the purchasing power of the individuals that results in increase market demand, that further increases the investment in economy. The cycle continues. The rise in prices takes place in expansion as the increase in supply cannot match with the increase in demand. The gap between demand and supply increases which results in increase in price. During expansion the bank deposits and supply of currency also increases. During peak of expansion there is growth of fixed capital as machinery, plants. As there is a significant difference between interest rates and profit margins, the finished goods stock up in hope of sales. The business keeps stock of finished goods. Huge profits of expansion attract investment which also increases the competition. Cost of all factors that are included in production increases but it is hard to increase the price in the same ratio. As competition increases the businesses have to decrease the price. This can lead shutting down of some uneconomical units. This is when recession begins.

The recession occurs when a decline happens in an economic activity. It causes declines in key measures of production. There is a committee called the Business Cycle Dating Committee at the National Bureau of Economic Research (NBER) which provides a better way to find out if there is a recession is taking place. It does that by determining the amount of business activity taking place and seeing the employment, industrial production, and wholesale-retail sales. The committee defines a recession when business activity reaches its peak and begins to fail. When the business activity starts to rise again, it's called an expansionary period. Mostly, the average recession takes about a year. When sales reduce drop in production, both the employment and income decreases, that causes a further decline in sales, a recession

ensues. This domino effect of economic weakness that arises from sales, output, employment, and income, causes a further decline that result in a downturn.

A depression is known as a severe downturn in production. They do not tend to put in new investment but liquidate the present stock. With depression unemployment increases and the demand for finished goods decreases.

The recovery period begins when new investment takes place and opportunities are created.

### **Check Your Progress 2**

5 What is a business cycle?

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6 Explain briefly about the different stages in a business cycle?

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### **5.5 INFLATION AND DEFLATION**

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When there is an increase in the price level or a fall in the value of money, it is known as inflation. Some of the factors of inflation are cost factors like rising import prices and the rate of expansion of money excessive demand, and imbalance between the sector demand and supply. To understand the type of inflation certain things are looked at like the price trends are analyzed, the rate of expansion of money supply, and the rate of increase in demand. To calculate the amount of inflation in the economy, indicators such as the Consumer Price Index, the Wholesale Price Index, and the GDP Deflator are used. The Wholesale Price Index is known as the measure of the cost of particular goods. It includes the raw

materials and semi-finished goods. The prices are measured during the early stage of the distribution system. The Consumer Price Index measures the cost of buying a fixed basket of goods and services. It is representative of the purchases of urban consumers. The GDP deflator is a ratio of nominal GDP in a given year to the real GDP in that year. Using these factors the changes in prices which have occurred between the base year and the current year can be calculated. But, these indicators reveal slow growth in the rate of inflation and prices keep increasing. The calculation does not include costs like electricity charges, communication costs, housing, and educational expenses. Inflation affects the private corporate sector as a result of the impact on credit off take, globalization of savings, and the interest rate.

### **5.5.1 Types of Inflation**

When there is supply-demand imbalances in the market economy, prices increase which give rise to inflation. Suppressed inflation occurs in an economy that is controlled where the upward pressure on prices is not allowed to affect the quoted prices. Inflation comes in many other forms. For example, government may introduce rationing of goods leading to long queues in front of ration shops. This leads to a black market for such goods where prices are above the quoted prices.

### **5.5.2 Creeping Inflation, Galloping Inflation and Hyper Inflation**

The creeping inflation, galloping inflation, and hyper inflation are recognized on the basis of the severity of inflation. When there is a moderate rise in prices of 2-3 per cent per annum, it is called as creeping inflation. Creeping inflation is generally considered good for a growing economy. Slightly rising prices results in better growth of output that they raise the profit margins of firms and encourage them to produce more. In a galloping inflation, the prices increase at double the rate per annum. Hyper inflation is a severe type where prices rise a thousand or higher per cent per year.

### **5.5.3 Demand Pull Inflation**

In demand pull inflation the aggregate demand increases more rapidly than the economy's productive potential that pulls prices up to equilibrate aggregate supply and demand. During the war, there is an increase in the government expenditure,

which raises the demand for output well above the supply and ignites a rapid inflation.

#### **5.5.4 Cost Push Inflation**

Due to a sizeable portion of the labor force being unemployed in an economy is called as cost push or supply shock inflation. The inflation occurs due to an increase in the cost or the supply price of goods caused by increases in the prices of inputs.

#### **5.5.5 Deflation**

Deflation is the decrease of prices over a specific time period. It is the opposite of inflation. It can be also said the decrease of the money supply. During deflation, the demand for liquidating goods is high and the purchasing power of money increases. Historically, not all depressions have been equal to the Great Depression. It is possible to have a falling money supply but rising prices. When the rate of increase in the velocity of money is greater than the rate at which the money supply is falling. This happens during the early stages of a hyperinflation as the monetary authorities cannot control the money supply.

#### **Check Your Progress 3**

- i) What is inflation and deflation?

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- ii) What are the types of inflation?

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#### **5.6 BALANCE OF PAYMENTS**

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The balance of payments is a statistical account of the transactions between residents of one country and residents of the rest of the world for a period of time. It is a procedure that is used for measuring, summarizing, and stating the effects of all financial transactions. The balance of payments statistics showcases all the

economic transactions of a country through the rest of the world for which payment may or may not be involved. These transactions may include exchange of goods and services or there may be loan transactions, gifts and grants, or short-term, long-term and portfolio investments. Except for gifts and grants, payment is involved in foreign currency. A transaction is recorded as being either a credit or a debit depending on the direction of the payment. If the transaction results in a cash outflow, it is recorded as a debit. If the transaction results in a cash inflow, then it is recorded as a credit.

The balance of payments is divided into three different accounts including:

### **5.6.1 The Current Account**

The current account records the net flow of goods, services and unilateral transfers or gifts. This includes inflows and outflows of items such as tourism, transportation, military expenditures, and investment income. The balance of payments resulting from this activity during the period is under consideration.

### **5.6.2 The Capital Account**

The capital account records the net flow of FDI in plant, equipment, and long-term, debt and equity investment. FDI is those investments in which business management is able to control the asset are retained. An investment by a business in its subsidiary operation which is located overseas can be considered as transaction. Long-term investments are those having a maturity time of greater than one year. Short-term investments are those having a maturity of less than one year.

The BOP is just the sum of these three accounts and is calculated as follows

$$\text{BOP} = \text{Current} + \text{Capital Account} + \text{Change in Official}$$

$$\text{BOP} = \text{BCRA} + \text{CPA} + \text{ORA}$$

The BOP is always 0. That balance since it is an accounting identity in a fixed exchange rate system.

### **5.6.3 Equilibrium and Disequilibrium in Balance of Payments**

When the payments are higher than the receipts in international transactions, it is known as the deficit balance of payments. When receipts are larger than payments, it is called as surplus balance of payments. There

are four main ways of measuring surplus or deficit

Balance on current account which includes the balance of visible and invisible items and unilateral transfers.

Basic balance which includes only the current account balance and the long term capital account balance.

Net liquidity balance that includes the basic balance plus the short-term private non-liquid capital balance.

Official settlement balance is the total of the net liquidity balance plus the short-term private non-liquid capital balance.

#### **5.6.4 Causes of Disequilibrium (Deficit)**

Here are some of the causes of Disequilibrium:

Short-term disturbances like floods, crop failures, and drought and so on may raise imports and reduce exports. Increase in income may lead to more imports and less exports. Initiation of development plans may necessitate more imports, while exports of raw materials may be curtailed.

While the prices of imports are rising for LDCs, the prices of exports are almost sticky.

Exports of a country may reduce due to: (a) contraction of the economy, (b) government policy, (c) reduction in exportable surplus, (d) higher home consumption, (e) circulation of better quality and new goods, and (f) increase in income.

Structural changes may change the demand for exports and imports adversely.

Higher rate of growth of population may necessitate more imports and a reduction in exports.

Import restrictions and tariffs by developed countries is another reason for disequilibrium in the balance of payments of LDCs.

## **Check Your Progress 4**

- i) What is balance of payments?

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- ii) What are the causes of disequilibrium?

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## **5.7 MONETARY AND FISCAL POLICIES**

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W.A. Lewis had stated the sphere of state action is very vast and all pervading. It includes "maintaining public services, influencing, attitudes, shaping economic institutions, influencing the use of resources, influencing the distribution of income, controlling the quantity of money, controlling fluctuations, ensuring full employment, and influencing the level of investment." According to Philip V. Taylor, "Budget is a master financial plan of the government. It brings estimates of anticipated revenues and proposed expenditures, employing schedule of activities to be undertaken towards the direction of national objectives. It is a device for consolidating various interest, objectives, desires, and needs of people into a program whereby they provide for their safety, convenience, and comforts." Through a fiscal policy the government tries to correct the inequalities of income and wealth of individuals which increases as the country develops. The internal market expands, the unessential imports reduces, inflationary pressure counteracts, the incentives for desirable types development projects are provided, and the total volume of savings and investment increases. The government has to adopt appropriate taxation, budgetary expenditure, and public borrowing policies. Fiscal policy is a projected balance sheet of the country that is prepared by the Chief Finance Officer of the country, who is the finance minister of the state.

### **5.7.1 Meaning & Objectives of Fiscal Policy**

Fiscal policy is a policy of the government in respect of its annual taxation program, public expenditure, and public debt programs. A budget is the annual financial statement of the government that contains the estimated expenditure which has been planned for the next year and revenues which have been estimated that can be raised through taxes and other revenue sources. Fiscal policy is a policy under which the government implements its expenditure, revenue and other programs during a year to produce a favorable distributional effect to avoid undesirable effects on the country's income and employment.

The objectives of fiscal policy are summarily stated below:

Mobilization of resources through deploying relevant fiscal instruments.

Ensuring high rate of capital formation.

Reallocation of resources to ensure the achievement of nation's socio-economic objectives.

Balanced regional growth.

Increased the employment opportunities.

Achievement of equity objective through appropriate use of fiscal instruments.

The primary sources of funds to finance development expenditure of a country can be grouped under the following categories:

Taxation.

Profits of the public sector (Price).

Domestic non-monetary borrowing.

External borrowing.

Borrowing from the RBI (monetized borrowing).

### **5.7.2 Impact of Fiscal Policy on Business**

The budget has the maximum impact on business. Each year budgets give opportunities and threats to businesses. While some businesses improve due to the budget, some businesses have to shut down. The introduction of VAT in India had a huge impact on the business. During the early 1990, the electronic industry was under tremendous pressure as the market growth rate was slow. The then finance

minister, Dr. Manmohan Singh reduced the excise on electronics which resulted in decrease of price and increase of sales. Other taxes have also been reduced which have increased the income of households. The taxes on corporate industry as corporate tax and dividend tax have had a deep impact on business. Like budget of 2005-06 allow investing in mutual funds to avoid tax now it is a big opportunity for mutual funds, it now to them how reap maximum benefit from this step. The savings rate has been reduced as banks can distribute consumer loans to consumers. A responsible manager will have an eye on the fiscal policy to take maximum advantage and minimize losses. It is clear that the budget creates an atmosphere for investment for many corporates.

### **Check Your Progress 5**

- i) What do you understand by fiscal policy?

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- ii) What has been the impact of the fiscal policy on business?

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### **5.8 LET US SUM UP**

In this unit we have made an attempt to make you understand the business cycle and how does the whole thing fluctuates with inflation and deflation. We also gave you knowledge about the balance of payments and causes of not having one. Finally we concluded the unit by making you aware how fiscal policies can influence your business.

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### **5.9 UNIT END EXERCISES**

5. List the different types of inflations and explain them in a few words/
6. State the aim and objectives of monetary and fiscal policies

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## **5.10 POINTS FOR DISCUSSION**

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Suppose you are a businessman and you encounter a disbalance in your financial scale, What are the precautions you will take restore the same?

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## **5.11 ANSWERS TO CHECK YOUR PROGRESS**

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1. i) National product is the measure of the volume of all goods and services that is produced by an economy in a period of time.  
ii) The total operations of an economy include three basic economic functions including distribution, disposition, and production.
2. i) The business cycle or economic cycle refers to the fluctuations of economic activity that takes place in a country for a specific period.  
ii) A business cycle is identified as a sequence of four phases namely revival, expansion, recession, and contraction.
3. i) When there is an increase in the price level or a fall in the value of money, it is known as inflation. Deflation is the decrease of prices over a specific time period.  
ii) Creeping Inflation, Galloping Inflation and Hyper Inflation, Demand Pull Inflation, Cost Push Inflation
4. i) The balance of payments is a statistical account of the transactions between residents of one country and residents of the rest of the world for a period of time.  
ii) Short-term disturbances like floods, crop failures, and drought and so on may raise imports and reduce exports. While the prices of imports are rising for LDCs, the prices of exports are almost sticky. Structural changes may change the demand for exports and imports adversely. Higher rate of growth of population may necessitate more imports and a reduction in exports. Import restrictions and tariffs by developed countries is another reason for disequilibrium in the balance of payments of LDCs.

5. i) Fiscal policy is a policy of the government in respect of its annual taxation program, public expenditure, and public debt programs.
  - ii) Some businesses improve due to the budget, some businesses have to shut down.
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## **5.12 SUGGESTED READINGS**

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